THE

REVENUE REGISTER.

No. 7. MADRAS:—WEDNESDAY, JULY 15, 1874. [Vol. VIII.

A RYOT'S ESTATE.

THERE has been a tendency in the later judgments of the High Court to uproot the old notion that the ryot was after all the real proprietor of the soil, the Government of the country, or the middleman interposed by Government between themselves and the ryot, being only entitled to receive a share of the profits of the land in the shape of assessment or rent. Of course we are aware that, in many instances, there are cultivators who are mere tenants-at-will, or at least tenants whose tenancy is determinable at the end of each revenue year. These are chiefly *payakaries* and *paracoodies* brought from outside by a proprietor, for the purpose of working his land: even these, however, may in time acquire proprietary rights which it will be no easy matter to determine. But we have been puzzled a good deal by expressions used by the Judges in giving judgment in R. A. 26 of 1871, *Krisnien and others* v. *Vencatachella Moodelly and others,* VI, *Revenue Register,* 157—not that we object to the decision at which their Lordships finally arrived, the principal feature of which was that Government have the right to regulate the supply of water from public sources of irrigation; but we venture to think that some of the reasoning on which that decision was based was novel at any rate, if not altogether without foundation. Their Lordships, Mr. Justice Innes and Mr. Justice Kernan, who decided the case, delivered separate judgments. In one part of his judgment, Mr. Justice Innes is reported to have said—"It is elementary law that an "easement cannot be claimed in respect of "a tenement but by the owner of that tene-"ment, and plaintiffs are *in no sense* owners "of the village lands or of *any portion of "the village lands in respect of which they "claim this right.* The plaintiffs are *tenants "from year to year,* and, though custom or "contract may practically attach to each "several tenancy the incidents of a per-"manent holding, defeasible only for non-"payment of the assessment which may "from time to time be imposed, they have "*nothing approaching to an absolute estate* "in the land, &c.;" and throughout both judgments, *i.e.,* the judgments of Innes and Kernan, J. J., the plaintiffs are spoken of as *mere tenants from year to year,* and the Government as their absolute landlord.

Now in this case the plaintiffs claimed to be the shareholders of the villages of Arialore and Kurivikudi, while the principal defendant was described as the sole mirasidar of the village of Pertikal. Mr. Justice Innes further observed that the

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well known case of *Ponnusami Tévar* v. *The Collector of Madura,* III, *Revenue Register,* 303, 'has *no* analogy to the present case, because the plaintiff in 'that case was the *proprietor* of the 'tenement in respect of which he claimed 'the easement;' the fact being that Ponnusami Tévar was no more *a proprietor* of his village of Puvandi, than was the principal defendant in the case under notice, who was described as the sole mirasidar of the village of Pertikal. We have italicised the words to which we wish to draw attention; for though not exactly in the case of Ponnusami Tévar, we observe that a vast distinction is made between the position of a Zemindar holding under a Sunnud and that of a ryot holding under a puttah. Yet we venture to doubt if the immemorial custom of the country (which is practically the common law of India) recognizes any such great distinction. In conferring a sunnud on a Zemindar the Government in most cases merely authorized him to collect the assessment from a specified tract of country, and could not confer on him any other rights of which he was not possessed before, nor deprive the ryots committed to his charge of any of the rights of which they were possessed before. To return to Ponnusami Tévar's case. Unless the ryots of his village had a right to the *whole* of the water as claimed by him, we cannot understand how he acquired the right to it. In our humble opinion he was entitled to the beneficial use of the water for irrigation, just as the plaintiffs in the case to which we have first referred were held to be, and had no more right to prohibit improvements in irrigation than they would have had, *so long as no actual damage was done to his property.*

To go back to the case of Zemindaries as to proprietary rights, to which so much importance has been recently attached, we cannot understand what great difference there is between the property conferred by a *sunnud* and that conferred by a *puttah,* except that, in the former case the assessment is fixed *for ever,* while in the latter case it is liable to alteration *on certain fixed principles,* and (in the case in question) *after thirty years.* Both confer a right of *permanent* property so long as the assessment (which very seldom indeed amounts to a *rent*-charge) is paid regularly, and both are equally determinable at once on failure of payment. The only difference, therefore, in the nature of the property seems to be that the Zemindar's *rent* (as the High Court would call *it*) is lighter than that of the ryot. But it may be doubted whether, on the whole, his position is more favourable, for in addition to the obligation to pay his assessment regularly, he enters into several *other* stipulations, and is even expressly bound 'to treat his ryots with tenderness,' and may forfeit his estate at any time for default in that respect also; whereas the ordinary ryot, holding under a simple puttah, can treat his land or his tenants (if he has any) exactly as he pleases, and cannot by any possibility be ousted, except for failure to pay his assessment, or under the Act for the acquisition of land for public purposes. It seems to us, therefore, to be an erroneous employment of words to say that such a proprietor is a 'mere tenant from 'year to year,' and 'possesses nothing 'approaching to an absolute estate in the 'land.' He *does* in fact *possess* the land *absolutely,* subject only to a land tax, the first principle of which is that it shall never amount to a full rent-charge; and there are surely very few landed proprietors who are not liable to a *land tax.* The whole confusion arises from the English habit of looking upon the Government as a landlord in the English sense. It would be more correct in our opinion to regard the

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Government and ryot as *joint-proprietors.* It is not correct to say that a ryot has nothing approaching to a permanent estate in his land, when it has descended from father to son from generation to generation; and when what the (Government theoretically) claims is a fixed share of the produce, which share, unless the Government is a tyranny, always bears so small a proportion to the whole, that it may certainly be paid without danger of oppression, if the ryot is ordinarily prudent.

We believe that it has been ruled by the Board of Revenue, or perhaps by the High Court, that 'a *puttah* is not a 'muniment of title, but only evidence of 'holding;' but the exact converse of this has long been established as more nearly approaching the fact; and it needs no argument to prove that a puttah is the *original* title to all ryotwari land. That all immemorial waste land in ryotwari districts is at the absolute disposal of Government as landlord is not disputed; but when once a puttah is given to a ryot, Government parts with its absolute estate, and becomes entitled, by the common law of the country, to a fixed share of the produce, which share is commuted from time to time into a money payment, called the assessment. But the assessment is *not* a rent-charge, and a ryot is *not* a tenant. On the contrary he is very often nothing but a middleman, and lets his land to tenants of his own, who (very likely) pay the full *rent* of the land. It will be observed that we are far from questioning the propriety of the High Court's decision in the case which we have made the text of our observations. We only object to the language used in describing the relation subsisting between the *ryot-proprietor* and the Government; but apart from this language, the reasons assigned by the Court are conclusive; for the right of the ryot-proprietors to water for irrigation may well be limited to the *enjoyment* of the water for irrigation and other purposes *as usual*, and they are sufficiently protected by the ruling that they are not to be injured by the regulation of water for irrigation. So far from being dissatisfied with the judgment as a whole, it is most satisfactory to us to find it expressly laid down that 'Government have the right to regulate the distribution of water to its ryotwari villages *so long as they do not prejudice them*' the 'tenants' (so called). We could only wish that the same rule had been laid down in Ponnusami Tévar's case. We hope to return to this subject, and to state our views more fully as to what is a puttah, and what are the properties attaching to a puttah; but meantime we shall be glad if our remarks provoke a discussion on the question, so that our own views may be shaped by the light of the information that may be thus placed at our disposal.

HIGH COURT—MADRAS.

HOLLOWAY AND INNES, J. J.

Suit for injunction against Collector—Power of Government to control irrigation.

The villagers of Padarapuliyur sued those of Chendur, and the Head Assistant Collector for the cancellation of an order made by the latter ordering plaintiffs' calingulah to be lowered. The Civil Judge found that the Revenue authorities, as representatives of Government, had power to control irrigation.

HELD PER HOLLOWAY, J., *that if there had been any violation of a contract by the landlord (Government) or the tenants, an action would lie for damages; but in this case there was no contract, no prescription, no evidence that plaintiffs had sustained any injury.*

PER INNES, J. *Without departing from the principle at VII, H. C. R., 60, there is no proof in this case that there was any diminution of supply.*

R. A. 133 *of* 1872.

Venkata Reddy and others *v.* A. Lister, Esq., Head Assistant Collector of South Arcot, and eighteen others.

THIS was an appeal from the judgment of Mr. R. B. Swinton, Acting Civil Judge of Cuddalore, in O. S. 6 of 1871. Plaintiffs sued for

the cancellation of the order of first defendant, lowering the calingulah in their tank-bank, and to restore the calingulah to its former state. The facts of the case appear from the following extracts from Mr. Swinton's judgment:—

"The plaintiffs, who are seven, of the cultivating inhabitants of the village of Padarapuliyur, in the Tindevanum Taluk, have brought this suit against sixteen cultivating inhabitants of the village of Chendur (plaintiffs meaning, I think, to represent their village community, and to set down the defendants as representing that of Chendur) and against Mr. Lister, the Head Assistant Collector in charge of that part of the district, and Mr. Graham, the Assistant Engineer; no special cause of action is stated against the ryots; but the object of the plaint is in effect to have cancelled by the Civil Court an order made by the Head Assistant Collector, and confirmed upon appeal (by defendants) to the Board of Revenue, the Collector of the district having in the meantime reversed it, that the calingulah, or outlet sluice, in the plaintiffs' tank-bank, should be lowered; the plaintiffs assert that by so lowering the calingulah, the water-supply in their tank is diminished so as to hold only three-fourths of the water it ought to hold, and that they have a right that their water should spread back over 143 cawnies of the land of Chendur. The first and second defendants answered that the Government were entitled to make what alteration they considered useful and beneficial to all concerned, and that the order of the first defendant was necessary to correct encroachments by the ryots of the plaintiffs' village. The defendants 7 to 19 answered that the plaintiffs still had sufficient water for their cultivation, and that the order was right and proper. The other defendants, but 12 and 13, put in a separate answer to the effect that their cultivation was damaged by the water being kept back by the high calingulah, and that if it were lowered, the plaintiffs would have enough water. The twelfth and thirteenth say they have no connection with the lands. The plaintiffs filed a copy of Mr. Lister's order of the 12th September 1868. A copy of the decision of the Collector in what the Collector terms Revenue Appeal Case No. 41 of (Fusly) 1278 cancelling the order of the Head Assistant Collector. An extract from the Proceedings of the Board of Revenue of August 5th, 1869, directing that Mr. Lister's arrangement should be carried out by the professional department.

I found that the issues had been settled and the evidence in this case heard by my predecessor, the third issue being 'whether the first and second defendants, as agents of Government, are vested with any authority, and if so, to what extent, to regulate the supply of water for the purposes of irrigation;' and this being a matter of law, the question of my settling the case, if able to do so, upon the former evidence, was not raised, and the pleaders were directed to confine themselves to it.

The only decision pointed out (by the plaintiffs' pleader) was that in the case of *Ponnusamy Tévar* v. *The Collector of Madura*, Madras High Court Reports, Vol V, page 6, but it was found not to apply to two common ryotwari Government villages in which the repair and construction of the irrigation works were completely under the Collector and Engineer; from a portion of the judgment (that at the bottom of page 19) it may be inferred that what is termed the arbitrary power of Government could in such a case be maintained; and of all cases most suitable for the exercise of the authority and discretion of the Revenue authorities, this appears to be one, the regulation of the waterspread behind one tank-bund so that it should not reach back upon the irrigated land behind it in juxtaposition and belonging to another village. Neglect or inability of the cultivators of the area of land originally supposed to be under a tank or channel, might encourage those in front to increase their waterspread by lengthening their embankment or raising it, or they might do so finding the level of their tank being raised by deposit of silt. Or *vice versâ*, those behind might take advantage of a lessened waterspread in front to extend their cultivation, although their may have been originally an estimate of what the area under each tank ought to be, as these works are in propinquity, I believe in practice, they are extended and altered to suit natural causes, or the necessities or abilities of the people to cultivate; and the Collector and the Engineer of the district have always superintended this upon the complaint or representation of either party.

The plaint does not allege any breach of any regulation against the revenue officer; it is more as a regular appeal to this Court against the decision of the Board of Revenue, for which both parties were contented to wait.

Their remedy, if they have a wrong, would be now to apply to Government; whether the actual revenue is increased or diminished by the change made in the calingulah seems to me utterly immaterial; the dispute is essentially one between the two villages.

How far Government can exercise its functions without having a law made to enable it to do so, is a nice matter, but in this case it appears to me that it was so unquestioned that the Revenue authorities had always decided such matters that no precise law was thought necessary. Regulation XII of 1816 in the preamble laid down that the determining in the Udalut of the zillah of suits respecting the cultivating and irrigating of land, as between proprietors or renters and their ryots, was inconvenient, and required Collectors to refer them to panchayut, and presumably

to decide those they did not refer, but these people of both villages are proprietors or ryots, and Section 18 of Regulation I of 1822 which extended the provisions of Regulation XII to all disputes between ryot and ryot was repealed by Act VIII of 1865 as if the object of that Regulation I of 1822 had only been to recover rent, and nothing has been provided but some Magisterial powers in the Criminal Procedure Code.

My finding upon the third issue is that the Head Assistant Collector and the Revenue Board had power or jurisdiction over the irrigation of both villages, so that their order to lower the calingulah cannot be questioned in a Civil Court; there is no separate or any cause of action against the other defendants; and the suit is dismissed with costs."

From this decision plaintiffs appealed to the High Court, on the ground that the Government had no such power in the matter of irrigation as the Civil Judge imagined; that they had long maintained the calingulah at a greater height than that now allowed by the Revenue authorities; that the lowering of the calingulah is calculated to cause serious loss to plaintiffs.

The High Court delivered the following

Judgment:—15th April 1874.

Per Holloway, J.—This is an application by tenants from year to year to prevent practically by injunction any alteration in a calingulah, which has existed for some time. It is unnecessary to advert to the difficulties, which would lie in the way of granting it, on account of the relief sought being much more extensive than could in any circumstances be granted, because I am of opinion that the case has not a single ingredient, necessary to the granting of such a remedy. I am unable to understand upon what ground the right is put. It cannot be upon prescription. It does not stand upon express contract, and from a letting from year to year it is impossible to imply a term as against the lessor that he will for all time leave unchanged, not only the object let, but everything how remotely soever connected with it. I am unable, therefore, to see any clear legal right which could have been violated by the acts of the landlord's agents. If it were otherwise, the case must fail, for there is not a particle of evidence that, if the changing of the state of things were an injury, it is one which could not be compensated by damages. In my judgment the case of plaintiffs fails on all points, and should be dismissed with costs. The original judgment put the right of the Revenue Board upon the executive authority of the Government, and with that doctrine we were unable to agree. If the acts had proved any violation of a contract by one of the contracting parties, we might have retained the suit and given permission to bring an action for damages.

Per Innes, J.—Without at all departing from the principles upon which my judgment proceeded in the case reported at page 60 of Volume VII of the High Court Reports, I am satisfied that the evidence in this case does not show any diminution by the agents of the landlord, the Government, of the supply of water below the quantity to which plaintiffs are entitled for the purpose of carrying on their cultivation as heretofore. The appeal must be dismissed with costs.

Morgan, C. J., and Kindersley, J.

Tender of puttah after expiry of fusly.

Where a landholder neglected to tender a puttah during the current fusly, but subsequently made the tender, and the question arose whether he was barred, not having tendered during the fusly—

Held, *that a landholder was bound to give, or tender, a puttah within the fusly.*

Referred Case 10 *of* 1873.

Vencatasami Naick *v.* Setupati Ambalam.

This was a case stated by Mr. Hutchins, Acting Civil Judge of Madura, under Section 28, Act XXIII of 1861, in the following terms:—"This is a suit for rent brought by the lessee of the Shivagungah Zemindary against a ryot. The enclosure A is a translation of the plaint. The Munsiff has dismissed the suit as barred by limitation, because the rent is stated to have been due for Fusly 1278, which ended on the 30th June 1869, and though the suit was instituted within three years from that date, namely, on the 15th June 1872, still the notice by which a puttah for the fusly was tendered to the defendant was not given within the fusly, in fact, not till 18th May 1872. In arriving at this conclusion, the Munsiff professes to follow the decision given by the High Court in Small Cause Referred Case 4 of 1872, on the 18th April 1872. A similar decree, dismissing a similar suit on the very same grounds, has been confirmed by the Principal Sudr Ameen with the remark that he thought it 'fully borne out by the authority referred to therein.' In the Referred Case 4 of 1872, the puttah had been tendered within the fusly, and the question was whether a tender made towards the end of the fusly was in time. It is true that the form in which the question was submitted was whether the puttah must be tendered at the commencement of the fusly, or whether it may be tendered at any time before the landlord's claim is barred by Section 8 (*i. e.*, Clause 8, Section 1) of the Limitation Act: but the latter part of the question was not necessary for the decision of the case.

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Their Lordships, as might have been expected, determined that a tender within the fusly was in time, but they commenced their judgment with the following observations:—'At what 'precise time these written agreements shall be 'entered into, the Madras Act VIII of 1865 'has not expressly enacted or declared. But 'they should *be made* and exchanged *as soon 'as conveniently may be after the creation and 'during the existence of the tenancy* the terms 'of which they are meant to express.' It is on this dictum, for I humbly conceive that it is nothing more than a dictum though entitled to the highest respect, that the District Munsiff has relied. I entertain considerable doubt whether their Lordships ever ment to decide, or even to express an opinion, that the landlord's claim to rent in the ordinary Courts would be wholly barred merely because he did not tender the puttah within the fusly. I think express words are necessary to bar a suit by limitation, and their Lordships have distinctly noted that no such words are to be found, and have merely spoken of what may be convenient and what *should* be done, by which I understand them to mean what is expedient or desirable.

On the other hand, I am compelled to admit that the whole tenor of the Act seems to contemplate the exchange of puttahs and muchilkas as taking place within the fusly or within a reasonable time after its termination. On the whole, the point seems sufficiently important and doubtful to render an authoritative declaration of the law very desirable. I therefore submit to the High Court the *question:* Is a suit for rent, brought by a landholder who is bound to give or tender puttahs, barred, if the tender has taken place after the fusly's expiration, and after a reasonable time has elapsed since its expiration, but within the three years allowed by Clause 1, Section 8 of Act XIV of 1859.

The only new points which have been brought to notice in this suit are—(1), that in A. S. 153 of 1866, this Court (Mr. Cotton) held, that in another village of this Zemindary, puttahs once given must be regarded as continuing in force from year to year until notice to the contrary; on the other hand, it has been set up that no puttah has ever yet been given to this defendant; (2), the order of Government at page 884 of the *Fort St. George Gazette*, dated 6th June 1871, requires that puttahs reserving a rental exceeding 50 Rupees be registered, and till the termination of the fusly, it may sometimes be impossible to say whether the rent payable on the entire holding will or will not exceed Rupees 50."

Their Lordships delivered the following

Judgment:—6th May 1874.

According to the opinion of a majority of the Full Bench, a landholder is bound to give, or tender, a puttah within the fusly.

HER MAJESTY'S PRIVY COUNCIL.

[BENGAL CASES.]

Right of Zemindars to sell lands held on putnee tenure free of all incumbrances.

A and B, two durputneedars, sued Z., a Zemindar, for possession and mesne profits, on the ground that he had fraudulently and collusively obtained a decree against R., putneedar, and sold the putnee avoiding the incumbrance of their durputnee. It appeared that the Zemindar had originally sued the durputneedars for arrears of rent, and that A and B had then pleaded R. was responsible for the rent, but did not plead that R. held merely benamee for Z.

HELD, *that there was no appearance of fraud; and that, from the very nature of putnee tenures, according to Regulation VIII of* 1819, *they could be sold free of all incumbrances.*

Judgment of the Lords of the Judicial Committee of the Privy Council on the appeal of Brindabun Chunder Sircar Chowdhry and another *v.* Brindabun Chunder Dey Chowdhry and others, from the High Court of Judicature at Fort William in Bengal, deliverd 5th March 1874.

Present.

SIR JAMES W. COLVILE.
SIR BARNES PEACOCK.
SIR MONTAGUE E. SMITH.
SIR ROBERT P. COLLIER.

SIR LAWRENCE PEEL.

THIS is a suit for possession and mesne profits of a durputnee mehal brought against the Zemindar. The charge is that the Zemindar, in collusion with the heirs of Rutnessur Roy, who was said to be merely a benamee holder of the putnee taluk, obtained a decree against them for Rupees 5,156 as arrears of rent of the said putnee, and that under that decree he sold the putnee, and having purchased it in his own name entered upon the estate of the durputneedar, treating the durputnee as having ceased to exist upon the sale of the putnee.

With regard to the fraud their lordships are of opinion that there is no sufficient evidence to satisfy a Court of justice that there was any fraud or collusion between the Zemindar and the heirs of Rutnessur, to allow the Zemindar to obtain a decree against Rutnessur for arrears of rent which were not actually due. A strong fact against the supposition of fraud was this, that the Zemindar originally sued the durputneedars for these arrears of rent. The durputneedars in that suit set up as a defence that Rutnessur was the putneedar and that they were merely the durputneedars of the mouzah, hence they said, the plaintiffs' claim can be made against Rutnessur or his heirs, and not

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against us. Now if the durputneedars at that time thought that the action ought to have been brought against the Maharajah of Kishnaghur, for whom they said Rutnessur held the estate benamee, why did they not say so in their defence? They said, Rutnessur is the person liable for these arrears and you must sue him. Upon that the case went to trial in the Collector's Court; and the judge who tried the case held that Rutnessur was the putneedar, and, therefore, that the plaintiffs could not sue the durputneedars, and he dismissed the suit with costs, whereupon the Zemindar brought an action against the heirs of Rutnessur for the arrears of rent, and it is that suit which is now charged as having been brought by collusion between the Zemindar and Rutnessur for the purpose of injuring the durputneedars by fraudulently obtaining a decree for rent which was not due, and then selling the putnee and avoiding the incumbrance of the durputnee.

There being, then, no fraud in the case, the question arises, whether, upon the sale of the putnee, under the decree for rent, it was sold free from the incumbrances which had been created by the putneedar, or, in other words, whether it was sold free from the durputnee. That depends upon the construction of Section 105 of Act X of 1859. That Section enacts, "If the decree be for an arrear of rent "due in respect of an under-tenure which by "the title-deeds or the custom of the country is "transferable by sale, the judgment-creditor "may make application for the sale of the "tenure, and the tenure may thereupon be "brought to sale in execution of the decree, "according to the rules for the sale of under-"tenures for the recovery of arrears of rent "due in respect thereof, contained in any law "for the time being in force." It has been held, upon the construction of those words, "according to the rules for the sale of under-tenures," that the effect of Regulation VIII of 1819, and I of 1820, is applicable to cases of sales under decrees of rent made under this Section 105; and then the question arises whether this was a sale for an arrear of rent "due in respect of an under-tenure which by "the title-deeds or the custom of the country "is transferable by sale."

The plaintiff in his plaint describes the tenure as a putnee taluk, and his own tenure as a durputnee, and the point is, whether, under the description of "putnee and durputnee," it is to be presumed that the putnee tenure was one such as is described as the tenure denominated a putnee by Regulation VIII of 1819. In the preamble of that Regulation—which, as contended for by the learned counsel, it must be admitted is not an enactment but merely a recital, it is said, "By the "terms of the engagements interchanged it is, "amongst other stipulations, provided, that in "case of an arrear occurring, the tenure may "be brought to sale by the Zemindar, and if "the sale do not yield a sufficient amount to "make good the balance of rent at the time "due, the remaining property of the defaulter "shall be answerable for the demand. These "tenures have usually been denominated put-"nee taluks."

Their lordships are of opinion that under the description "putnee taluk" and "durputnee taluk" it must be *primâ facie* intended that the tenure called a putnee tenure was a tenure transferable by sale and upon the creation of which it was stipulated by the terms of the engagements interchanged that in case of an arrear occurring, the estate might be brought to sale. If so, according to the terms of Regulation VIII of 1819, the tenure might not only be brought to sale, but it might be sold free from incumbrances. By Section 8 of Regulation VIII it is enacted, "Proprietors under "direct engagements with the Government "shall be entitled to apply in the manner "following for periodical sales of any tenures "upon which the right of selling or bringing "to sale"—not the right of selling or bringing to sale free from incumbrances, but—"upon "which the right of selling or bringing to "sale for an arrear of rent may have been "specially reserved by stipulation in the "engagements interchanged on the creation of "the tenure." Then, by Section 11, the effect of such a sale is stated as follows—"It is "hereby declared that any taluk or saleable "tenure that may be disposed of at a public "sale under the rules of this Regulation for "arrears of rent due on account of it, is sold "free from all incumbrances that may have "accrued upon it by act of the defaulting pro-"prietor, his representatives or assignees, "unless the right of making such incum-"brances shall have been expressly vested in "the holder by a stipulation to that effect in "the written engagements under which the "said taluk may have been held."

It appears, therefore, to their lordships that this was the sale of a taluk transferable by sale, and upon which the right to sell for arrears of rent was reserved in the engagements entered into by the parties. Consequently, according to the effect of Section 105 of Act X of 1859, and Sections 8 and 11 of Regulation VIII of 1819, and probably also of Act I of 1820, the effect of the sale of the putnee taluk was to destroy all incumbrances which had been created by the putneedar, and consequently to destroy the particular incumbrance which is mentioned in the plaint in this suit, namely, the durputnee of the plaintiff.

Their lordships, therefore, think that the suit was not maintainable, and that the learned Judges of the High Court did not probably give

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sufficient effect to the recital of the preamble of Regulation VIII of 1819, and the enactments of that Regulation, in holding that it did not appear that the putnee was a tenure upon which the right to sell for arrears of rent had been reserved by the contract of the parties.

Under these circumstances it appears to their lordships that the decision of the High Court was not correct, and they will, therefore, humbly recommend Her Majesty to reverse that decision and to affirm the decision of the Principal Sudr Ameen, with the costs of this appeal.

Suit for declaration of boundary—Uncertainty.

The Zemindar of Shooshung sued for a declaration of his boundary line which lay, he alleged, much to the north of the boundary laid down for him in the Revenue maps. It was found that the Revenue maps were incorrect, and that the Zemindar's limit lay to the north.

HELD, *that as the exact limit of the zemindary had not been clearly shown, a decree, defining its exact geographical position, could not be made; but that the Zemindar was not bound by the survey maps, he having clearly proved his title to lands much to the north of the supposed boundary line.*

Judgment of the Lords of the Judicial Committee of the Privy Council on the appeal of Rajah Rajkishen Sing Surma Bahadoor *v.* The Collector of Mymensingh (on the part of Government), from the High Court of Judicature at Fort William in Bengal, delivered 23rd April 1874.

Present.

SIR JAMES W. COLVILE.
SIR MONTAGUE E. SMITH.
SIR ROBERT P. COLLIER.

THE object of this suit was twofold. It was brought to set aside the boundary line which had been laid down by the survey authorities, and confirmed by all the revenue authorities up to and including the Sudr Board of Revenue; and it further sought a declaration of the right of the plaintiff, as the Zemindar of the permanently settled zemindary of Pergunnah Shooshung, to the whole of the lands lying to the north of that boundary line within the boundaries set forth in the plaint. Now there does not seem to be much dispute or difficulty as to the western, eastern, or north-eastern boundaries, but the difficulty in the case has been to say what is the northern boundary of the permanently settled zemindary of Shooshung, if it is not the line laid down by the survey authorities. The boundary claimed by the plaint is "the hills running along the "north of the villages of Abulgarai and Sen-"sengarai upon the north." Their lordships will presently advert to the difficulty of giving a definite interpretation to that description of the northern boundary. At present it is sufficient to say that the first object sought by the suit has been fully obtained; that the Zillah Judge found that the survey authorities had erroneously laid down the boundary line; that although there was some difference of opinion in the division bench to whom that decision of the Zillah Judge went in the first instance by appeal, all the judges composing the Full Bench of the High Court concurred in ruling that that line had been improperly laid down; and that it was not binding in any way upon the plaintiff.

There is no cross-appeal against that decision, and the boundary line in question must, therefore, be taken to have been conclusively set aside.

The only question then which has been brought here by appeal, and the only question with which their lordships have to deal, is whether the plaintiff, the appellant, has made out his title to the declaration sought in his suit of his right as zemindar to all the lands within the boundaries described in the plaint. Their lordships have no hesitation in saying that they concur entirely with the High Court in thinking that the appellant has given very strong evidence of rights of dominion exercised within the forests lying to the north of what may be called the survey line, and of rights of ownership as Zemindar and possession as Zemindar of certain villages, more particularly those villages which are referred to in the judgment of Mr. Justice Phear, as mentioned in the ruboocarees, of Mr. Irwin and Mr. Inglis, and in the final decision of Mr. Jenkins, the Commissioner.

In respect of those villages there was a distinct contest whether they belonged to the zemindary of Shooshung, or whether the Government had a right to assess them as belonging to the territory alleged to be independent and unsettled, or whether they belonged to the Cossyah Rajah; and the result of those proceedings was to affirm the title of the Rajah of Shooshung.

Those proceedings then, if not conclusive in this case, at least afford very strong evidence that those villages are part and parcel of the appellant's settled zemindary. And if their lordships could have seen their way to any decision which would shut the door to future litigation and define beyond all further question the rights of the appellant, they would have been extremely glad to pronounce it. But upon full consideration they do not see how upon the pleadings and evidence before them, and consistently with the practice of the Courts in like cases, they can make such a decree. They must observe that there is upon this record, even as to the extent of the claim of

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the plaintiff, considerable ambiguity. It has already been stated that the northern boundary claimed is said to consist of the hills running along the north of the villages Abulgarai and Sensengarai upon the north, and the decree of Mr. Simson, the Zillah Judge, adopts that boundary, and declares that the plaintiff is entitled to the lands within it. But what is that boundary? The appellant's counsel have wholly failed to satisfy their lordships where the village of Sensengarai lies. It is not marked upon the survey map, and though it would appear, by the very rude sketch map which is also in evidence in the cause, to be in the neighbourhood of Abulgarai, it is impossible to fix geographically its precise position. Then again, taking the position of these two villages to be fixed, it would be impossible for their lordships, on the evidence before them, to say that the hills running along the north of those villages was the Doora range of hills, which the learned counsel for the appellant have asserted to be the northern boundary of his zemindary. Upon the evidence and the maps it would rather seem that the boundary described in the plaint is to be found in some hills considerably to the south of the Doora range and nearer to the village of Abulgarai. Therefore any declaration in the terms of the plaint would, as it seems to their lordships, leave the real boundary of the plaintiff's estate still a matter of doubt and difficulty, and keep the door to future litigation still open. Again, their lordships do not see that they are in a condition to direct in terms any inquiry, the result of which would be certain to do justice between the parties and to ascertain the true boundary. At one time it appeared to their lordships that if the district of Gowalparah or the zillah of Rungpore, out of which that district was taken, had been shown to be precisely conterminous with Mymensingh, they might, by directing an inquiry as to the line which divides the two districts, have settled the question between the Government and the appellant, inasmuch as the appellant's zemindary comprises the whole pergunnah of Shooshung, and that seems to have extended to the northern limit of Mymensingh. Mr. Cowie's argument has, however, left it, to say the least, extremely doubtful whether there was not always some undefined and independent territory known as the Garrow hills, between Gowalparah and Mymensingh. Upon the whole, then, their lordships feel that they are incompetent to declare the boundary or to do substantially more than has been done by the High Court. It has, however, been suggested that the decree of the High Court (and this has been fairly admitted by Mr. Cowie) may be open to some misconstruction, and their lordships would propose to vary it in the way to be now stated. They do not think it necessary to alter that part of it which reverses the decree of the Zillah Court, in so far as it declares the plaintiff to be entitled to the lands specified in the plaint, because there is really no substantial difference between reversing that part of the decree and directing that that part of the decree be omitted; and they leave unaltered the declaration—"That the boundary line laid "down in the survey map as the boundary line "of the said plaintiff's settled estate is not the "true boundary line, and that the said plaintiff "is not bound by the said survey map or by the "order of the Collector of the 15th April 1859, "and the subsequent proceedings thereon."

But after that declaration they propose to insert the following words:—"And the Court "not defining the true boundary line of the "plaintiff's zemindary of Shooshung, doth "further declare that this decree is to be with-"out prejudice to the rights of the plaintiff "to any portion of the lands in dispute as part "of his settled zemindary of Shooshung or "otherwise." That will prevent any possible misconstruction of the former decree as a decision adverse to the plaintiff's claim in this suit.

Their lordships cannot refrain from expressing their opinion that it is extremely desirable that whatever means may be open to the Government for defining and ascertaining the boundary of the plaintiff's zemindary and his rights in this large tract of land, which under the special Act of 1869 has been put under the peculiar jurisdiction thereby created, should be taken with as little delay as possible.

There may be sound political reasons founded on the peculiar character of the Garrow tribes which justify such an enactment. But care should be taken to prevent such abnormal legislation from interfering more than is absolutely necessary with the private rights of a Zemindar under the perpetual settlement. And it is but fair that the plaintiff, who has already been put to so much expense and trouble in relation to his property, should be relieved from further expense and trouble as much as possible. It must be, one would think, within the power of the survey officers to ascertain the true boundaries of his settled zemindary, which upon the evidence would certainly seem to comprise the villages as to which he has given such strong evidence of title, and, presumably at least, so much of the disputed land as lies to the south of them.

Their lordships, therefore, will humbly recommend to Her Majesty to vary the decree of the High Court by inserting the further declaration stated above, and, subject to that variation, to affirm the decree; and they think that, there being some variation of the decree, but that variation not being a very substantial one or going to the full extent of what was claimed by the appellant, each party should pay his own costs of this appeal.

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OFFICIAL PAPERS.

MR. PLUNKETT—SALT DEPUTY COLLECTOR, NELLORE DISTRICT.

Proceedings of the Madras Government, Revenue Department, 16th April 1874.

Read the following Proceedings of the Board of Revenue, dated 24th March 1874, No. 660:—

DURING his recent visit to Nellore, the 1st Member obtained specimens of the salt from different stations in the district which won prizes at the Agricultural Exhibition, held in Nellore, and also from Kistnapatam, which station was inspected in detail.

2. The specimens are of excellent quality. At Kistnapatam the manufacture was already (in February) in full progress, and the salt which was being produced was equal to any which the 1st Member has seen. He was much struck with the great neatness and regularity displayed in everything connected with the works. The drainage and fencing of the platforms and the formation and thatching of the heaps were unexceptionable; and the early date at which the manufacture was commenced was most satisfactory. Mr. Thornhill was assured by the Collector that the Kistnapatam station is in no way superior to other stations in the district.

3. The Board are of opinion that the state of things reported by the 1st Member reflects great credit on Mr. Plunkett, the Deputy Collector in charge of Salt in the district, and shows what can be done by officers of energy and administrative tact. They resolve to bring Mr. Plunkett's good conduct to the notice of Government.

4. The specimens of salt will be sent to the Collectors of Chingleput and South Arcot. The Board see no reason why if salt of such good quality can be produced in Nellore by the middle of February, equally good results could not be obtained in those districts.

Order thereon, 16th April 1874, No. 447.

The Government regard with satisfaction this testimony to Mr. Plunkett's zealous and successful discharge of his duties.

(True Extract.)

(Signed) C. G. MASTER,

Acting Secy. to Government.

CINCHONA NURSERY AT WYNAAD.

Proceedings of the Madras Government, Revenue Department, 17th April 1874.

Read the following papers:—

Proceedings of the Board of Revenue, dated 11th March 1874, No. 543, Forest No. 23.

Read the following letter from Lieutenant-Colonel R. H. BEDDOME, Inspector of Forests, to J. GROSE, Esq., Secretary to the Board of Revenue, dated Madras, 26th January 1874, No. 2,028:—

Letter from the Collector of Malabar, to the Inspector of Forests, No. 32, dated 9th January 1874, with two enclosures.

I HAVE the honour to forward documents as per margin for the orders of the Board.

2. The *Cinchona succirubra* grows so splendidly in Wynaad, and its introduction on a large scale is of such great importance, that every encouragement should be given to coffee planters to grow it. The *C. calisaya* and *C. officinalis* are not, I think, likely to succeed so well.

3. I am much in favour of a large nursery being established in the Wynaad. The transport of seedlings by coolies from Ootacamund will be an expensive operation, and many plants would die on the road.

4. The Blue Gum (*Eucalyptus globulus*) does not appear to thrive much below 5,000 feet, and I am afraid that it will not succeed well in the Wynaad. The local forest officer on the hills might, however, be requested to supply the Collector with some seed. Many of the trees are now seeding well at Ootacamund, but the collection of this seed is a work of much trouble, as the trees are generally very lofty.

ENCLOSURE NO. 1.

From A. MACGREGOR, Esq., Collector of Malabar, to Major R. H. BEDDOME, Inspector of Forests, dated Calicut, 9th January 1874, No. 32.

I have the honour to forward a letter from Captain Cox stating that he is unable to obtain from the Government nurseries on the Nilgiris certain Cinchona plants owing to there being none to spare, and stating that no definite promise can be given for the future owing to the propagating establishment having been reduced to two men.

2. The question of establishing nurseries in Wynaad, as desired by the Secretary of State, was discussed in G. O., 23rd November 1872, No. 1,612, and the alternative course of supplying plants from the Nilgiris approved by Government. I trust, therefore, that any addition necessary to meet the demands of

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Wynaad planters may be made to the funds at the disposal of the Commissioner.

3. Two years have elapsed since I wrote on the subject, and during that time the increased growth shown by the trees planted in Wynaad is remarkable; and they are already bringing in a fair return, and, in places, they are being planted as shade for coffee where partial shade is found desirable.

4. I enclose copies of extracts from papers regarding the Blue Gum tree, and it certainly seems worthy of a trial in Wynaad. I propose putting a number down at Gudalur and at Vythery, which is at times feverish, and where fever is generally referred to the swampy hollows which surround the Bazaar, Cutcherry, Hill, &c. I have no doubt that many planters would try the experiment if assured of a supply of plants at the beginning of the monsoon.

5. I should be glad to know whether seedlings in considerable quantities could be furnished from the Nilgiris by the Forest Department, and at what cost.

ENCLOSURE 1 IN No. 1.

From Captain W. S. H. COX, to A. MACGREGOR, Esq., Collector of Malabar, dated Charambady, 12th January 1874.

I have the honour to request that you will forward this my application to be supplied during the months of June and July 1874 with Cinchona plants as named in the margin.

C. calisaya, the variety known as Mr. Broughton's No. 5, 12,000 plants raised from cuttings.

C. officinalis angustifolia, 5,000 plants.

C. succirubra, 5,000 plants not less than one foot high, to allow of being planted out.

2. I applied to the Superintendent of the Government Cinchona Plantations during the monsoon of 1873 for plants of *Cinchona officinalis angustifolia* and *Cinchona succirubra*, and was informed that there were none to spare.

3. Again in October 1873 I applied for 12,000 plants of the *Cinchona calisaya* before mentioned and for 5,000 plants of *Cinchona officinalis angustifolia*, but Mr. McIvor could give me no definite promise, his propagation establishment having, he informed me, been reduced to two men.

ENCLOSURE 2 IN No. 1.

A Wonderful Tree.

In drying up Italian marshes, in getting rid of the swampy districts near Paris, and in using up the surplus water of the Camargue, an Australian tree (*Eucalyptus globulus*) has shown extraordinary power. In addition to the faculty of absorbing ten times its weight of water from the soil, this plant is said to possess the power of destroying miasmatic influence by the emission of antiseptic camphorous effluvia. At the Cape its effect has been magical, while in Algeria fever has rapidly receded before the conquering Eucalyptus. Cuba attests the validity of the Australian plant in removing moisture and fever, and it is predicted by enthusiasts that the Eucalyptus will make short work even of the dreaded Pontine marshes.—*Iron.*

The Eucalyptus.—The French Academy of Sciences has received an interesting communication from M. Gimbert, who has been long engaged in collecting evidence concerning the Australian tree (*Eucalyptus globulus*), the growth of which is surprisingly rapid, attaining besides gigantic dimensions. This tree, it now appears, possesses an extraordinary power of destroying miasmatic influence in fever-stricken districts. It has the singular property of absorbing ten times its weight of water from the soil and of emitting camphorous effluvia. When sown in marshy ground, it will dry it up in a very short time. The English were the first to try it at the Cape, and within two or three years it completely changed the climatic condition of the unhealthy parts of the colony. A few years later, its plantation was undertaken, on a large scale, in various parts of Algeria, and complete immunity from local fever has been maintained by it. In the Island of Cuba, paludean diseases are fast disappearing from all the unhealthy districts where this tree has been introduced.

Memo.—The Australian Gum tree or Eucalyptus is cultivated in the South of France with extraordinary success. The introduction of this tree is a national benefit (to whatever nation, and wherever it will succeed). It grows very fast even in a dry and hungry soil; it affords excellent timber; it acts as a disinfectous for unwholesome places; the bark contains an alkaloid febrifuge; the leaves may be smoked; in short, its uses seem to be numerable.

From an article on Kew Garden in *Edinburgh Review* for October 6th, 1873.

(True Extract.)

(Signed) A. MACGREGOR,

Collector.

Submitted for the orders of Government.

2. It is most desirable to establish a nursery of Cinchona trees in the Wynaad, but it appears that some propagating establishment must be entertained on the Nilgiris before plants can be supplied.

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3. The Inspector of Forests is of opinion that the *Cinchona succirubra* would grow well in the Wynaad, though it will be expensive to carry the seedlings there.

4. The Commissioner of the Nilgiris will be requested to inform the Board what he thinks the cost of the transport will be, and to send a supply of the seed of the Blue Gum *(Eucalyptus globulus)* to the Collector of Malabar.

From A. MACGREGOR, Esq., Collector of Malabar, to C. G. MASTER, Esq., Acting Secretary to Government, Revenue Department, dated Calicut, 18th March 1874, No. 20.

I have the honour to inform you that I have this day received a copy of Board's Proceedings, dated 11th March 1874, No. 543, and, as the case is one in which a few weeks more or less is important, I write direct instead of through the Board.

2. I much fear that one main object which I had in writing, viz., securing Captain Cox a supply of trees in time to put them in at the beginning of the monsoon, is in danger of falling through, unless immediate action is taken. It must be remembered that, in their order of 23rd November 1872, No. 1,612, Government approved of my proposal that young plants should be prepared on the Nilgiris and supplied free, on due notice being given.

3. Captain Cox has certainly taken the lead in the matter of fairly trying Cinchona in Wynaad, and if, after giving fair notice, he does not get the supply of plants by June, which he doubtless counts on, and has prepared land for, he may fairly complain; and the experiment is anyhow likely to be much discouraged. He has made his own inquiries, and wishes to try a particular species, and all that is necessary to enable him to do so is to direct the Superintendent to get cuttings ready, and place the necessary funds at his disposal for that purpose.

4. This will be something very trifling compared with what a propagatory establishment in Wynaad would cost.

5. It will be observed that Captain Cox expressly says *cuttings*, and the reason for this is that, as is well known, the Cinchona hybridizes very freely, and only by cuttings, therefore, can the purity of any particular species be secured, seedlings being subject to endless variation.

6. As regards the expense of transporting seedlings from Ootacamund, we can estimate with tolerable accuracy. In 1870, I was supplied with 500 well-established plants for distribution in Wynaad. They were packed in two baskets, each one cooly-load. If, therefore, these plants are prepared at Ootacamund, they will cost not more than 20 Rupees a thousand to carry them to their destination; if bandy can be used, considerably less.

7. The question of establishing a nursery in Wynaad requires great consideration, and I trust that the disposal of this immediate demand for trees made in accordance with what nearly amounted to a Government guarantee will not be allowed to remain unsatisfied, while the question is being discussed.

8. As regards the Eucalyptus again, I hope Government will order a certain number of seedlings to be distributed at once, so as to lose no time in settling the fact of whether the tree will flourish. If the climate is somewhat against it, it may be very difficult to germinate the seed and rear the young seedling to such a size as to admit of its being planted out, though a healthy seedling raised in a more congenial climate might do well. As a matter of fact, there is, I believe, a very fine specimen of the Eucalyptus growing in one of the lowest-lying parts of Wynaad.

9. Anyhow, the attempt at raising from the seed might be anticipated to fail when first tried, and the season of Wynaad at this time of the year renders it useless to send a skilled hand there from a distance.

Order thereon, 17th April 1874, No. 457.

The Government observe that, in their Proceedings of the 23rd November 1872, No. 1,612, it was decided that a regular Cinchona plantation in the Wynaad was unnecessary, and they see nothing in the papers now before them to lead to a re-consideration of that order.

2. There can be no real difficulty in sending plants from the Nilgiri Hills when available; but to enable Mr. McIvor to comply with indents, which may be made upon him, timely intimation of the wants of planters must be sent to him. He will, doubtless, also be prepared to supply seed with instructions for their planting.

3. With reference to paragraph 3 of the Board's Proceedings recorded above, it is observed that in Mr. Macgregor's letter, dated 26th October 1872, No. 2,174 (adverted to in G. O., 23rd November 1872, No. 1,612), the red bark was spoken of as "already sufficiently extended over Wynaad to place it within the reach of every one."

4. In order that the wishes of the Secretary of State, as contained in his despatch recorded in G. O., 31st January 1872, No. 197, may be carried into effect as far as is consistent with due economy, the Superintendent of the Cinchona Plantations will be desired to state whether it is necessary that a larger propagating establishment at Neddiwattum is required if the resolution passed in November

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1872, viz., to supply young plants free to private persons in Wynaad on due notice given, is still to be acted upon. He will submit, through the Commissioner of the Nilgiris, a statement of the extra cost which is likely to be incurred for this purpose; and he will state whether it is possible to comply, at an early date, with the requisition alluded to in the letter from the Collector of Malabar, dated 18th March, No. 20. The order in question hardly contemplated such large demands.

5. The Inspector of Forests will attend to the demand for the Eucalyptus, and supply a sufficient number for experimental purposes.

6. The cost of carriage will, of course, fall upon the applicants in both cases.

(True Extract.)

(Signed) C. G. MASTER,

Acting Secy. to Government.

AGRICULTURAL TOOLS FOR JUNGLE-TRIBES, COIMBATORE DISTRICT.

Proceedings of the Madras Government, Revenue Department, 18th April 1874.

Read the following Proceedings of the Board of Revenue, dated 26th March 1874, No. 685, Forest No. 34:—

Read the following letter from A. WEDDERBURN, ESQ., Collector of Coimbatore, to J. GROSE, ESQ., Secretary to the Board of Revenue, dated 25th February 1874, No. 41:—

I HAVE the honour to request the sanction of Government, through the Board, for the expenditure of Rupees 2,000 as tukkavi or aid to the jungle-tribes, consisting of Irulers, Moodughurs, Sholagurs, Kaders, and Mulcors, as they are variously called in the several hill-localities they inhabit.

2. Some, if not all, of these tribes are wretchedly poor, scarcely even possessing a cloth, and they have hitherto existed by a destructive cultivation in the forests by burning the trees and planting in the cleared spots for one season, and then renewing this destructive process.

3. I have arranged personally with several of these tribes that they will re-cultivate the former clearings and destroy no more forest, and, as one of the reasons for the former destructive process was the want of proper implements, I propose to aid each headman of a settlement with tools, such as mamoties, bill-hooks, and axes, with which to clear and till the ground, and, where requisite, with seed-grain, re-payable after three years.

4. Should the value of the tools or grain supplied be even eventually not recovered, such expenditure will be greatly more economical and advantageous to the permanent interests of the country than the destruction of timber-bearing tracts. It is a necessity that these tribes must live; they must have grain to subsist on, and, as they have no money to buy it from others, they must grow it themselves. I have been a good deal among them in their hill-clearings, heard their grievances, and promised them assistance; and I think it will be a better policy to obtain a control over them by such intercourse than by the hitherto severe course of prohibiting their cultivation, which, in fact, is scarcely possible owing to the long distances, paucity of the forest subordinates, and general inaccessibility of their locations. The evil is done before it can be prevented, but by warnings and assistance, such as I now propose, it is hoped to get them to follow a more settled course of agriculture.

Submitted for the favourable consideration of Government.

Order thereon, 18th April 1874, No. 462.

Sanctioned.

(True Extract.)

(Signed) C. G. MASTER,

Acting Secy. to Government.

PRIZE ESSAYS, AGRICULTURAL SHOW—MADRAS.

Proceedings of the Madras Government, Revenue Department, 21st April 1874.

Read the following Proceedings of the Board of Revenue, dated 16th April 1874:—

Read the following papers:—

General Prize List, Madras Agricultural Show, and Miscellaneous Proceedings Nos. 1,293 and 1,755.

Letters from Superintendent, Government Farms, dated 17th March 1874, Nos. 415-A and 414-A, and 24th March 1874, No. 426-A.

Read also reports of the Judges appointed to decide upon the respective merits of the competing Essays.

The Board resolve to make the following awards:—

(1.) For a report on the Indigenous Breed of Cattle in the Madras Presidency, Prize Rupees 100, Dr. Short; Extra Prize Rupees 50, S. Appasawmy Moodelly, late Tahsildar, Verdachullam Taluk, South Arcot.

(2.) For a report on the cultivation of Indigenous Tobacco, Prize Rupees 100, S. Appasawmy Moodelly, late Tahsildar, Verdachellam Taluk, South Arcot.

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(3.) For a report on the experimental cultivation of Carolina Paddy, Prize Rupees 100, C. Cundasawmy Moodelly, Deputy Collector of Naidupett.

2. The rejected Essays will be returned to the writers; the four successful ones will be printed at the Government Press. The following number of copies of each will be required; orders as to their distribution will be issued on their receipt:—

			Copies.
1.	Essay on cattle, 1st Prize	...	300
2.	" " 2nd "	...	100
3.	Tobacco	...	200
4.	Carolina paddy ...	...	300

Order thereon, 21st April 1874, No. 488.
Recorded.

(True Fxtract.)
(Signed) C. G. MASTER,
Acting Secy. to Government.

SUNNUD FOR THE PEDDA KIMEDY MALIAHS, &C., GANJAM.

Proceedings of the Madras Government, Revenue Department, 24th April 1874.

Read the following Proceedings of the Board of Revenue, dated 25th September 1873, No. 1,934.

Read the following letters:—

From C. G. MASTER, ESQ., Collector of Ganjam, to J. GROSE, ESQ., Secretary to the Board of Revenue, dated Chetterpore, 30th June 1873, No. 1,488.

I HAVE the honour to return the form of Sunnud received with the Board's Miscellaneous No. 3,029, dated 25th April 1872, duly filled in.

2. With reference to the Board's Proceedings of the 26th May 1873, No. 868, I beg to point out that it was not only on account of the Rent Roll that I desired to obtain further information, but because I considered it quite possible that the names of villages not belonging to Pedda Kimedy might accidentally be included in the list; and I thought it my duty to make the Return as accurate as could be, even at the risk of delay.

3. I have since received the information which I sought from the Special Assistant Agent, and beg to enclose a statement showing the villages as returned by the Pedda Kimedy Zemindar, with the necessary remarks as to the result of the inspection made. The Board will observe from this that my asking for further information was not in vain, and that the Pedda Kimedy Zemindar included in his list several villages not belonging to his zemindary, besides entering several villages more than once.

4. In filling up the Sunnud, I have omitted the villages which I consider ought to be excluded, and I leave it to the Board to decide, by means of the enclosed statement, whether my entry in the Sunnud is correct. I append a separate list of villages so omitted, with the reasons for the omission. In the case of those which are under dispute with neighbouring proprietors, the necessary entries can hereafter be made in the Sunnud when the disputes are settled.

5. In regard to the form of Sunnud, which the Board forwarded with their Miscellaneous Proceedings, dated 25th April 1872, No. 3,029, I have the honour to point out that in several respects it appears to be inappropriate. The references to remissions in paragraph 3 and to Mahomedan Law in paragraph 5 are unnecessary. There are no Curnums, and, therefore, paragraph 7 might be omitted. As to paragraph 9, which implies a regular system of engagements, it would be next to impossible to enforce such a scheme, and it has been proposed (in the reports made upon the "Laws Local Extent Bill," *vide* G. O., 29th January 1873, No. 10, Legislative Department) to dispense with the Rent Recovery Act in excepted districts such as these Maliahs.

6. I observe that the Government Pleader was to have been consulted as to the form of Caboolent (G. O., dated 27th March 1871, No. 555, Revenue Department).

7. With reference to the same Government Order, the peishcush is payable from Fusly 1281 inclusive. The special conditions approved thereby have been omitted with reference to G. O., dated 10th April 1872, No. 588, Revenue Department.

ENCLOSURE No. 1.—Form of Sunnud.

ENCLOSURE No. 2.—List of villages given by the Zemindar of Pedda Kimedy.

ENCLOSURE No. 3.—Statement showing names of Maliah villages returned by the Zemindar as belonging to his zemindary.

From T. J. MALTBY, ESQ., Assistant, for Collector of Ganjam, to J. GROSE, ESQ., Secretary to the Board of Revenue, dated Chetterpore, 15th August 1873, No. 1,836.

As requested in the Acting Sub-Secretary's official memorandum, No. 1,156, dated 4th August 1873, I have honour to forward herewith a copy of the letter of the Special Assistant Collector, dated 13th June 1873, No. 94, referred to in paragraph 3 of my letter to the Board of Revenue, dated 30th idem, No. 1,488.

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ENCLOSURE No. 1.

From J. M. SMITH, Esq., Special Assistant Collector, to C. G. MASTER, Esq., Collector of Ganjam, dated Udayagiri, 13th June 1873, No. 94.

In reply to your letter, No. 809, dated 25th May 1872, enclosing the Pedda Kimedy Zemindar's statement showing the names and villages said to be situated in the Pedda Kimedy Maliahs, and his annual income derived from them, also enclosing an English abstract of the same; and requesting me to have this statement verified and a census of those Maliahs taken by the Baminigam Sub-Magistrate; I have the honour to inform you that the work has been done by the Ramagiri Magistrate.

2. I sent you per Book Post his Statement No. 1 of the Mootah villages and their rent for the last three years; also No. 2, a return of population. I also return the Zemindar's own statement and the English abstract you sent me and the Magistrate's report.

A Sunnud for the Pedda Kimedy Maliahs will accordingly be submitted to Government as directed in G. O., dated 27th March 1871, No. 555, and 10th April 1872, No. 588. The Board accept the list of villages as finally settled by the Collector of Ganjam.

2. The Board do not think that the Collector's objections in paragraph 5 to the form of the Sunnud are of importance, and, as the idea of special restrictions is abandoned, there is no need to consult the Government Pleader as suggested in paragraph 6.

3. But the Board see no necessity for the creation of a separate and distinct estate as will be done by the issue of a separate Sunnud. The Maliah tracts are a portion of the original estate, and, in fact, were at one time the residence of the family. They are inhabited by Ooriyah Paiks like the rest of the estate; but at the permanent settlement were, owing to their secluded and difficult position, either unknown to, or unnoticed by, the Circuit Committee, and the villages and assets found no place in the original Sunnud. The Board think it is worth considering whether the issue of a separate Sunnud for what is a portion of the Zemindary as it existed at the time of settlement is the proper course. It would seem better to add a postscript to the existing Sunnud and Cabooleut to the effect that, whereas certain villages were not included in the original settlement of the estate the Government have been pleased to confirm them to the Zemindar in addition to the present estate, and on terms similar to those set forth in the Sunnud, subject to a peishcush of Rupees 1,000 per annum.

See Board's Proceedings, dated 8th April 1867, No. 2,193.

Order thereon, 24th April 1874, No. 506.

In pursuance of orders issued in the course of a correspondence, now of long standing, the Board of Revenue submit a Sunnud declaring a certain tract of hill-country in the Ganjam District, commonly known as the "Pedda Kimedy MALIAHS," to be a zemindary, the person in whose favour the document is drawn up being the Zemindar of the permanently settled estate situated in the adjacent lowlands, and known as Pedda Kimedy *alias* Vizianagur. They, at the same time, observe that it would be perhaps sufficient to add a postscript to the old Sunnud of the lowland estate of Pedda Kimedy including the hill-tract in one and the same zemindary, on the ground that, although there is no mention whatever of the hill-villages in the accounts on which the permanent settlement was based on its introduction in this Presidency at the commencement of the present century, there is no room to doubt that the Zemindar of that period was even then, and probably long before, paramount in the neighbouring highlands.

2. The Governor in Council has to remark that (with more or less reservation) the same may be said to have been the case with all the Maliahs fringing the lowland zemindaries of Ganjam. It was pointed out by the late Agent in his annual Report, 1867 (paragraph 9), that of the three great "Kimedy" estates,—for instance, Purla, Pedda, and Chinna Kimedy,—the "Purla Kimedy" Maliahs alone are held both *de facto* and *de jure* by the Zemindar of that name, being attached to his zemindary in the accounts of the permanent settlement. He gave a list of eight (all the greater) Maliahs. "There is no mention of any of these," he added, "in the public accounts; it is probable that the Zemindars, while accepted perhaps as arbitrators and revered as powerful allies, had no direct control over the Sourahs and Khonds of the hills in those days. They have probably acquired their present position within the last half century of peace and order. No longer suffered to wage war with one another, each engaged his clansmen in the work of consolidating his power and influence amongst the neighbouring highlanders." Two of these Maliahs, Goomsur and Sooradah, it is observed, fell directly into the hands of Government shortly after the suppression of the Goomsur insurrection. The cases of two others have been disposed of as occasion arose, on considerations of a political nature; thus, the peace of the country imperatively requiring it, an order was passed dissevering the Maliahs of Chinna Kimedy *in toto* from the control of the Zemindar of that name,

G. O., 19th September 1868, No. 1,456, Judl. Dept.

G. O., Revenue Dept., 5th December 1870, No. 1,931.

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an annual compensation being secured to him; while in Cuttengiah, on the other hand, the title and possession of the present chief were secured and attested by the grant of a Sunnud, fixing a yearly nuzzur of Rupees 50, and declaring the tenure to be hereditary and *non*-transferable. The propriety of this last condition was accepted by the Government for the reasons then strongly urged by the late Agent, viz., that "these hill chiefships, as long as they remain in the hands of the old Rajpoot families, are of great use to us in our intercourse with the Khonds and Sourahs; but, if they once fell into possession of Banians and usurers, we should very soon be landed in agrarian disturbances of the worst kind. The interest of the chief in the estate, therefore, should be inalienable; and, in consideration of the light peishcush or nuzzur, he should be required to attend and serve with his Paiks, and generally to afford his assistance whenever called upon by the Agent to the Governor for that purpose." The tenure being thus declared feudatory, it was noticed that Clause 3rd, Rule X of the Agency Rules, sanctioned by Government in virtue of the powers vested in them by Section 4, Act No. XXIV of 1839, would regulate the succession, namely:—

G. O., Revenue Dept., 9th September 1870, No. 1,419.

G. O., Revenue Dept., 8th July 1868, No. 1890.

"Clause 3rd. On the death of any proprietor, the Agent shall personally investigate all claims to the succession to hill zemindaries or other landed possession held on feudatory tenures, and shall, through the Board of Revenue, submit the result of his inquiry for the orders of Government, who, should there be more than one claimant, will exercise their inherent right to select, as successor, the one among them most acceptable to the people and best qualified to fulfil the duties of the situation."

3. Similarly, in the present case, the question before them will be decided by Government on grounds of public policy; and these, in their opinion, demand reversal of the previous determination to grant these Pedda Kimedy "Maliahs" on zemindary tenure. The proceedings in the above cited "Cuttengiah" case were fully reported to the Secretary of State, and approved by Her Majesty's Government; and His Excellency in Council considers that the present reference may fitly be disposed of in the same way. The Board of Revenue will, therefore, be requested to prepare and submit a Sunnud in favour of the proprietor of the Pedda Kimedy estate in terms similar to those used for the Cuttengiah chief, the *peishcush* heretofore proposed of Rupees 1,000 per annum being changed for a *nuzzur* of Rupees 500, the tenure being now burthened with the condition of occasional service.

Revenue despatch No. 2 of 1869.

4. The Agent in Ganjam will report, through the Board of Revenue, whether there are any other hill-tracts which belong to the same category, with his suggestions for settling them on the present chiefs and their descendants in the same way; it being the fixed intention of Government to place such properties out of all risk of alienation, either privately or under the Revenue-sale laws; while by retaining them under the Agency Administration, they will be included in the "Excepted Districts" Bill now before the Governor-General's Council, and all doubt as to the validity of certain unsuitable laws and general Regulations in these remote and uncivilized tracts will be definitely removed.

G. O., Legislative Department, 29th January 1873, No. 10.

(True Extract.)

(Signed) C. G. MASTER,
Acting Secy. to Government.

FISHERY AND TRADE IN SALT-FISH, ATTANKARAI—MADURA DISTRICT.

Proceedings of the Madras Government, Revenue Department, 27th April 1874.

Read again G. O., 14th March 1873, No. 313, Revenue Department.

Read also the following Proceedings of the Board of Revenue, dated 14th April 1874, No. 848:—

Read the following letter from W. McQUHAE, Esq., Collector of Madura, to J. GROSE, Esq., Secretary to the Board of Revenue, dated Ramnad, 3rd March 1874, No. 56:—

WITH reference to the Order of Government, in the Revenue Department, dated 14th March 1873, No. 313, communicated with the Board's Miscellaneous No. 1,712 of the 20th March 1873, I have the honour to submit copy of a letter from the Deputy Collector in charge of Salt and Sea Customs, dated 17th February 1874, giving detailed information regarding the fishery and trade in salt-fish at Attankarai.

2. The specimens collected by the Deputy Collector have unfortunately been spoiled, and as probably every fish can be had at any large fishing station on this coast, it seems scarcely worth-while to send them from an out-of-the-way place like Attankarai. The trade in salt-fish is considerable, but I see no reason why the operations of the fishermen at Attankarai should be specially regulated. If any general measure be adopted for the preservation of Sea fisheries, Attankarai is a place to which any such measure would be made applicable, but I scarcely see what could be down without a law

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specially passed for the purpose, and there is no very urgent necessity for such a law in this part of the coast, fish being adundant enough at present.

3. The Zemindar of Ramnad used to receive certain payments from the fishermen, but these payments were regulated by no fixed principle, and have been discontinued since the Estate came under the Court of Wards. It is probable that these payments originated in contributions of fish for the Zemindar's kitchen.

4. My opinion is, that the fishermen should be left to their own devices at present, but I would supply salt at a cheap rate for salting fish properly. I am not very well acquainted with the subject, but I am under the impression that salt-fish ought not to be stinking-fish as it is at present. If with proper curing the trade becomes more developed, it might be necessary to regulate the fishing.

ENCLOUSURE No. 1.

From M. RAMASAMY MUDALIAR, Deputy Collector, Salt and Sea Custom Department, to W. McQUHAE, Esq., Collector of Madura, dated Mutturagunadapatam, 17th February 1874, No. 38.

I have the honour to furnish the report called for in your letter No. 622, dated 27th March 1873, regarding the fishing referred to in Government Proceedings, No. 313, dated 14th March 1873.

2. Attankarai, the place referred to by Colonel Roberts, is a subordinate port of this district, wherein the import and export of goods are permitted. One of the principal articles of import at this place is salt-fish. It is brought out chiefly from the fisheries of the Island of Rameswaram; the salt-fish that is sold and carried off into the interior is not, therefore, the product absolutely of the fishery off Attankarai. The fish caught within five miles of Attankarai is likewise brought to Attankarai, where it is cured and sold by salt-fish traders, who are distinct from the fishermen. Not only the local salt-fish traders, but others from the interior, encamp at Attankarai, during the fishing season, and make that place the depôt of the salt-fish they collect. Hence the extensive traffic in salt-fish referred to by Colonel Roberts, in paragraph 3 of his Report, dated 8th January 1873, No. 4,383, and embodied in the Proceedings above quoted.

3. Upon the receipt of your letter, under reply, with a view to ascertain approximately the quantity of fish caught at the Attankarai fishery, I procured through the Sea Customs Officer of Devipatam a daily Return of the number of boats employed in catching fish in this fishery and the estimated value of the fish brought ashore.

4. A monthly Abstract of these Returns is subjoined for your information. The value given is what the raw-fish when brought ashore, was estimated at, for the purpose of division between the fishermen and the salt-fish traders, who advance money to the fishmen.

Month.	Number of boats.	Value of fish.		
		RS.	A.	P.
May	117	3,471	1	0
June	174	2,535	10	0
July	182	4,850	7	0
August	142	1,276	6	0
September ...	185	2,137	0	6
Total...	800	14,270	8	6

5. Attankarai, as Colonel Roberts says, is situated at the mouth of the Vygai, the bay formed here is protected from the south-western winds, between April and October by the neck of land which juts out into the sea. Hence shoals of fish resort to this part of the coast for spawning. There is no doubt that there is here, as at other fisheries, an indiscriminate slaughter of fish, as Colonel Roberts remarks, but this is due, I believe, to the ignorance of the local fishermen. The smaller fish if spared, might furnish better food to the public than they do now as indiscriminately caught.

6. I beg to annex a list of the shoals of fish which make their appearance in this part of the coast between May and September. The local names of the fish are given in tamil.

7 The specimens collected by me, from evaporation of the arrack, in which they were secured, underwent putrefaction. The jars which contained the specimens, were not well glazed. Accidentally I noticed one of the jars to be cracked and emit a bad smell, on opening the jar I found the specimen within to be putrefied; so were all the specimens, without exception, found to be on examination. I will collect the specimens again during the next season, and send them up carefully, preserving them in arrack.

8. I deferred the submission of this report, because the specimens called for could not be sent; as, however, a reminder has been received, I submit the report at once, and beg to apologize for the non-transmission of the specimens.

(True Copy.)

(Signed) W. McQUHAE,

Collector.

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List of Fishes.

Fish caught at the Attankarai fishery between the months of May and September 1873.		Months in which the Shoal appear.
1. வாளை	Valai	May to September.
a யெருமைநாக்குவாளை.	Yerumainakku Valai	September.
2. கிளி	Kili	May, June and August.
3. சுரு	Shark	June to September.
4. நகரை	Nagarai	May to September.
a சென்னகரை ...	Sennagarai	May and June.
5. வுடகம்	Wudagam	May to August.
6. சீலா	Sila	May to September.
a வரிசீலா	Vari Sila	September.
b தொரையன்சீலா ...	Thorayan Sila	Do.
c நெய்மீன்சீலா	Neyemeen Sila	Do.
d தாளம்சீலா	Thalom Sila	June and September.
7. திருக்கை	Tirukai	May to September.
a செந்திருக்கை ...	Senthirukai	May and September.
b பூவாதிருக்கை	Puvathirukai	August and September.
c ஆடாதிருக்கை ...	Adathirukai	September.
d சிருபுள்ளிதிருக்கை ...	Sirupullithirukai	Do.
e கருவாதிருக்கை ...	Karuvathirukai	Do.
f மண்திருக்கை ...	Munthirukai	Do.
g புலியன்திருக்கை ...	Pulianthirukai	Do.
8. குதிப்பு	Kuthippu	May, June and September.
9. வெங்கணா	Venganah	May, June, July and September.
10. கரால்	Karal	May to September.
a தட்டுகரால்	Thattukaral	September.
b மெனைகட்டிகரால் ...	Menaikutti Karal	Do.
c பொட்டுகரால்	Pottukaral	May.
d கொளுங்கரால் ...	Kolungaral	September.
11. கட்டா	Kattah	May and September.
12. தோட்டா	Thottah	May, June and September.
13. சூடை	Sudai	May to September.
14. குமுளா	Kumula	May to July and September.
15. கலவா	Kalva	May and September.
16. மெரால்	Moral	June to September.
a புள்ளைமெரால்	Pullaimoral	May and September.
b வாளைமெரால் ...	Valai Moral	September.
17. பாரை	Parai	May to September.
a செங்கணிபாரை ...	Senganiparai	May, June and September.
b முட்டபாரை	Mottaparai	June, July and September.
c குளிபாரை	Kuliparai	September.
d சூபாரை	Suparai	August and September.
e நெய்பாரை	Neyiparai	September.
f கல்லன்பாரை ...	Kallanparai	Do.
g கன்னடியன்பாரை ...	Kannadiyenparai	Do.
h சுள்ளியன்பாரை ...	Sulianparai	Do.
18. காளை	Kalai	May to September.
a கட்டிகாளை	Kattikalai	August and September.
19. மணலி	Manali	May and June, August and Sept.
20. திரியா	Theriya	May, June, July and September.
21. வெளா	Vela	May and September.
22. கெளுத்தி	Keluthi	May to September.
a நெடுமுகன்கெளுத்தி...	Nedumungan Keluthi ...	September.
b மாந்தான்கெளுத்தி ...	Manthan Keluthi	Do.

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List of Fishes.—(Continued.)

Fish caught at the Attankarai fishery between the months of May and September 1873.			Months in which the Shoal appear.
	c அடசல்கெளுத்தி	Adasal Keluthi	September.
	d பனையன்கெளுத்தி	Panyan Keluthi	Do.
23.	கிலாத்தி	Kilathi	May.
24.	வுளுவை	Ooluvai	May, June and September.
25.	வுள்ளம்	Woollam	May to August.
26.	சிரையா	Siriya	May, June and September.
27.	பூவாலி	Puvali	Do.
28.	குடைகுத்தி	Kudikuthi	June to September.
29.	சிங்கி	Singi	June, July and September.
30.	நெத்திலி	Nethili	June to September.
31.	வாவல்	Vaval	August and September.
	a கருவாவல்	Karuvaval	July and September.
	b செவ்வாவல்	Sevvaval	September.
	c வெள்ளவாவல்	Vellavaval	Do.
32.	ஊளா	Ulah	August and September.
33.	கத்தாளை	Kathalai	August.
34.	பன்னு	Pannah	Do.
35.	சூரை	Surai	September.
36.	கொமராயன்	Komarayan	August and September.
37.	நாய்மீன்	Noymeen (dog fish)	September.
38.	தேளி	Theli	Do.
39.	கெலகான்	Kelakan	Do.
40.	பொராமீன்	Porameen	Do.
41.	பாண்டல்	Pandal	Do.
42.	லெத்தி	Lethi	Do.
43.	செங்கணி	Sengani	Do.
44.	கொடுவா	Koduva	Do.
45.	கிடாத்தலையன்	Kedathalayan	Do.
46.	குடரு	Kudara	Do.
47.	ஓரா	Ora	Do.
	a குருவிஓரா	Kurivi Ora	Do.
	b வெள்ளஓரா	Vella Ora	Do.
	c கணவாஓரா	Kanava Ora	Do.
48.	சிக்கணு	Sikkana	Do.
49.	மதனம்	Mathanom	Do.
50.	கடலாரு	Kadalarah	Do.
51.	செப்பிலி	Seppali	Do.
52.	உருளா	Urula	Do.
53.	தோலி	Tholi	Do.
54.	சடல்மீரு	Kadal Meera	Do.
55.	கடல்விரல்	Kadal Veral	Do.

(Signed) M. RAMASAMY MUDALIAR.
Deputy Collector.

(True Copy.)

(Signed) W. McQUHAE,
Collector.

MUTTURAGUNADAPATAM,
17*th February* 1874.

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Submitted to Government with reference to G. O., dated 14th March 1873, No. 313.

2. The Board suggest that the papers be communicated to Dr. Day. They agree with the Collector that no special measures need be adopted with reference to the Attankarai fishery. The subject of selling salt at a cheap rate for salting fish is separately engaging attention. The Superintendent of the Museum might be requested to identify the fish of which vernacular names are given by the Deputy Collector.

Order thereon, 27th April 1874, No. 512.

The Government concur with the Board in thinking that no special measures are required.

2. The correspondence will be forwarded to Dr. Day and to the Superintendent of the Government Museum. Dr. Bidie will be asked to name any of the fish of which he desires specimens.

(True Extract.)

(Signed) C. G. MASTER,

Acting Secy. to Government.

Copying of Inscriptions.

Proceedings of the Madras Government, Revenue Department, 4th May 1874.

Read the following letter from A. C. BURNELL, Esq., Ph. D., to the Hon. D. F. CARMICHAEL, Acting Chief Secretary to Government, Ootacamund, dated Mangalore, 6th April 1874:—

With reference to G. O., No. 51, dated 13th January last, I have the honour to state that I have carefully gone over the copies of inscriptions (returned herewith) sent me, and am decidedly of opinion that it is useless to get such copies at such a price.

2. One inscription only is of intrinsic interest, as it shows that the last great sovereign of the Vijayanagara dynasty, Krishnaraya, did actually visit Tirunamalai in A.D. 1516. It is certain that he restored most of the great pagodas in Southern India, but this inscription seems to indicate that the South Arcot District was under his rule.

3. The rest of the inscriptions would be interesting for paleographic purposes, were they facsimiles; as they are, they are valueless.

4. I have no doubt that more important inscriptions exist at Tirunamalai, but I am quite certain that no Brahman can be found to read them. Of such inscriptions photographs or estampages only would be of use.

5. I trust that the failure of this attempt will not cause neglect of this very important inquiry. I would respectfully suggest that it should be continued elsewhere, but that only copies made by means recognized by Arcæologists should be procured. All others (like these) are scientifically useless. Repeated experience has shown that copies made by free-drawing, or read off and written in a current hand, are entirely untrustworthy even in the case of legible and modern inscriptions, and still more in the case of those in obsolete characters.

6. I much regret that I have not yet been able to report on the other copies of inscriptions sent to me. My catalogue of the Tanjore MSS. absorbs all my spare time (which is very little), but I hope to do so shortly. Meanwhile, I can only suggest that no time be lost in securing proper copies of important inscriptions, and that Collectors be informed that copies like those already sent are useless as well as fancy translations, several of which I see in the Government Proceedings.

Order thereon, 4th May 1874, No. 535.

His Excellency the Governor in Council resolves to circulate the foregoing letter for the information and guidance of local departments, in continuation of G. O., 14th December 1871, No. 2,108, Revenue Department.

2. For convenience of reference, an extract from Mr. Burnell's Pamphlet on the best way of making and utilizing copies of Indian inscriptions (recorded in G. O., 23rd November 1870, No. 367, Educational Department) is printed below, and the attention of officers is requested to the methods therein described.

3. Important inscriptions, such as that mentioned in paragraph 2 of Mr. Burnell's letter, should be copied, if possible, in one or other of these modes if photographs cannot be taken.

4. The Government are much obliged to Mr. Burnell for his letter.

(True Extract.)

(Signed) C. G. MASTER,

Acting Secy. to Government.

Extract from Mr. Burnell's Pamphlet on the best Way of making and utilizing Copies of Indian Inscriptions.

The first question is, how to make the copies? Many ways have been tried: rubbings by heel-ball on paper, impressions on linen made by a pad daubed with printing ink, sketch drawings, photographs, &c., &c. Considerable experience* and a number of experiments have convinced me that all these methods are defective, and that only two ways are really trust-

* Cf. Also the remarks of Prinsep and Mill, and recently of Dr. Bhau Daji, as to the great alterations in the translations required by improved transcripts of inscriptions long known and published. The great objection to photography as a means of re-producing inscriptions consists in the imperfections of the paper used and the difficulty (or impossibility) of managing the light.

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worthy—one applicable to inscriptions on stone, and the other to those on metal.

2. Firstly, for inscriptions on stone, I recommend impressions on stout, unsized paper, such as is now manufactured at Paris for the use of Egyptologists. The inscription must, first of all, be quite cleared of dust or mud or other obstructions, and this may be best done by a hard clothes-brush. The paper is then to be rapidly but uniformly wetted in a tub of water, and applied to the inscription, and forced into the irregularities by repeated and forcible strokes with a hard brush; an ordinary clothes-brush is as good as any for the purpose. If the stone be clear of dust, the paper adheres, and when dry falls off, forming (if at all well done) a perfect mould of the inscription. Paper large enough to cover most inscriptions is easily to be had; in the case of very large ones, it is necessary to lap over the edges of the sheets, and apply a little gum and water or weak paste to them; and also to prevent those sheets first applied from falling and thus spoiling the rest, a few poles or sticks leaning against the corners in large inscriptions, or the gum used for joining will be found enough. When properly dried copies made in this way (in French, "estampages") may be rolled up or put in blank books without the slightest injury, and even will stand damp. M. Mariette-Bey and Dr. Brugsch both assured me in Egypt last year that they never found this plan fail.

3. The second process is applicable to inscriptions on plates of metal; I devised it several years ago, and never found it fail. The plate or plates should be carefully cleaned with a dry brush, and the letters occasionally must be cleared out with a blunt graver. The native process of rubbing the plates with acid and then putting them in the fire to loosen the encrustations should never be resorted to, as it invariably injures them fatally. From the cleaned plate an impression (reverse) is to be next taken by passing a roller charged with ink over the plate, and the printing from it as from an ordinary copper plate. From this impression another may be taken by means of an ordinary copper-plate press; and, with a little practice, a perfect facsimile may be thus obtained, the letters being white and the rest of the plate appearing a dark grey. Photozincography and many other methods exist by which "estampages" and facsimiles made by the last process may be multiplied to any extent.

MISCELLANEOUS.

AGRICULTURE IN EUROPE.

PARIS, *February* 21.

THE first annual show of fat cattle since the war and the rinderpest has just been held in Paris. It was a success beyond expectation. Excepting in the case of calves, of which on the present occasion there were none, the entries corresponded with those of the year 1854, and were one-third less than in 1870. Two distinct facts have been developed by this exhibition—remarkable improvement in the breeds of cattle, notably crossings with the Durham race, and a tendency to secure the qualities of precocity and mean size. The end of all industry is profit, and there is a law, such land, such stock, that cannot be violated. It is a theory more seducing than accurate—in France at least, that the value of an animal is in proportion to its weight. Climate and soil are agencies, however, that must be taken into account. Large-sized, heavy stock, is possible in England, but not as a rule perhaps for France. For example, the butchers—a class that farmers must listen to—prefer an ox 16 to 18 cwts.; rather than one of 22 or 24 cwts. The former weight also will command at least one franc more the hundred weight. In the case where the soil is poor and pasturage scanty, sheep are reared, and in time passed on to richer districts—in the north and west, to fatted. The best sheep for the Paris market, which finds the readiest sale and highest price, is that which weighs only $\frac{3}{4}$ cwt. Legs of mutton 20 lbs. in weight, and cutlets $1\frac{1}{2}$ lbs. are not at all in demand. Beef to make soup, is the chief flesh diet for the working classes, then pork; mutton rarely. Heavy joints of the latter can but be disposed of in hospitals, schools, and barracks, where contract prices only are allowed. Hence, the precocity and food of animals must not only be considered, but also the exigencies of the butchers' customers. Thus, the chief objection against South-Downs is their weight. Three sheep weighing each $\frac{3}{4}$ cwt. will realize one-third more in total price, than a single sheep weighing $1\frac{1}{2}$ cwt. The South-Down has its advantages not the less, as it has one-third less development of flesh in the region of the shoulders and breast, than any other breed of sheep in France. The display of implements was very satisfactory, and indicated that in a few years home manufacturers will be able to supply all the wants of France.

The relinquishing of the naked fallow, and the deeper cultivation of the soil, will give an impetus to the use of machinery. The action of light, air, and heat on the soil, is only now commencing to be accurately studied. So im-

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portant is the rôle of the sun in the economy of life, that Professor Tyndall asserts, "plants and animals are children of the sun." Humus plays an important part in the mechanical, as well as in the chemical conditions of vegetable nutrition. When the air cannot freely enter the soil, owing to its natural stiffness or insufficient deep tillage, humic acid is produced, which is not beneficial. Humus is useful only when it can act, in producing those phenomena of fermentation so mysteriously connected with the plant's life. It is more essential in cold and elevated latitudes than in the contrary. Being black it warms the soil; it binds loose soils, and loosens tenacious clays; acts in a sense like lime. The presence of humus is not at all a consequent evidence of fertility; it is power of work, in a word, that constitutes its value. In the case of heavy clays, a series of wet seasons tend to produce an excess of humic acid; to remove this injurious acidity, lime is added, or the culture of oleaginous plants in a rotation secures the same end.

Dr. Hofmeister, of the Veterinary School at Dresden, has been conducting a series of experiments to test, if the addition of oil, in the proportion of ¾ lb., to 20 of hay, increased the digestibility of the food and its assimilation. The effect was really only remarkable in the case of dried clover; meadow hay gave no results. But in the case of clover even, the oil only imparted so much facility in being digested, as if the clover had been freshly cut—restored thus a lost quality. When clover hay has been well saved, and not kept too long, the addition of oil or other fatty matters, is not worth the outlay.

The arrival of spring, when the agriculturist has want of so much manure, may explain the discussions taking place on commercial fertilizers and manures in general. A few good principles to remember; that agriculture ought never to neglect any substance capable of increasing the produce of the soil; that commercial manures, whether artificial, like sulphate of ammonia, &c., or natural, like guano or nitrate of soda, ought only to be viewed as supplemental fertilizers, to make good what the farm itself cannot produce and repay the soil; that only the "marvellous" manures announced should be received with suspicion, and that while analysis can reveal the richness of a manure, it cannot prescribe authoritatively for all the wants of the soil. Since the supply of Peruvian guano has ceased to create anxiety as to possible exhaustion, manufacturers of other manures are not in the best of humors at having to lower prices, which they raised in 1872, sulphate of ammonia, 75 per cent., utterly regardless, that there was a point at which even gold could be bought too dearly. The English company which has the concession of the feculent matters of Paris, is rapidly manufacturing *poudrette* and sulphate of ammonia at moderate prices. Boussingault and Chevreul remind us, that when chemistry reveals 10 per cent of nitrogen in sulphate of ammonia, and the same percentage in guano, poudrette, and farm yard manure, equal power of fertility must not be imagined, as the latter substances are still the more valuable, no doubt owing to the influence of the other organic, but non-azotized matters. It is sound practice to rotate manures as well as crops. In the north of France nitrate of soda alternates with phospho-guano, both being aids to farm yard manure. The used chrysalis of silk-worms has appeared as a manure; pressed like oil cake, and guaranteed to contain 10 per cent of nitrogen, it sells for 10 fr. per cwt.

An important sheep-farmer draws attention to the bad practice of hiring out rams; recommends that it is a better arrangement to sell or buy a ram, than hire out his services. Often on returning, the animal from his promiscuousness brings the scab to the flock, and from overtaxed services ceases to have the power of reproduction, or imprints that power so feebly, that it is the blood of the mother which dominates in the offspring. Those who aim for a breed of sheep with aptitudes of precocity should avoid the hiring of rams.

It is necessary to keep in mind, that deodorizing is not disinfecting. Chloride of lime, verdigris, and copperas, are efficacious for the purposes of the former. But for disinfecting a stable, killing contagion, nothing can surpass steam and boiling water, if they can be laid on. Failing this remedy, burning sulphur, and enclosing the fumes for three hours is excellent, following up, by a washing of the walls and utensils with a solution of carbolic acid and copperas; whitewashing the walls ultimately, not forgetting to throw some chloride of lime into the wash. This is the infallible remedy that science and experiment concur as capable of destroying every virus.

M. Renaud draws attention to the condition of ponds and ordinary drinking places for cattle; asserts that when the latter prefer impure to pure water, such indicates a tendency to coming disease, and that may generally be averted, by supplying the animal with salt. Foul water is as unfit for cattle, as for man. A pig for example will often leave its proper food to root up and devour that part of the litter most saturated with its own urine. Such is ever the evidence of a threatening disease, and necessitates sparing meals, a little antimony, and a regular supply of salt.—*Agricultural Gazette of India*, 30th April 1874, p. 225.

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CHOICE TABLE BUTTER.

[By the Hon. Clark King.*]

In order to make a choice tub of butter, at all times see that your cows are provided with the best kind of food for that purpose. In summer when your cows are at the pasture, let them have the best pasture you can provide. As a rule, a dry pasture which lies high and rolling produces the best grasses for butter making; it makes a yellow, fine-grained, sweet tub of butter, while a low, swampy pasture, full of foul grass, and bushes, makes a much poorer grade. Such pastures are not fit for the dairy. A moist pasture, if not too wet, may produce a good quality of grass, and in such pastures good butter can be made; but my experience, after dealing in butter some ten years and manufacturing butter during this time, has taught me that a dry pasture, producing sweet qualities of grass, is the kind for dairying. At this season of the year, when the cows are stabled, and during the spring, when the cows are giving milk, give them the very best quality of early cut hay, and a fair amount of meal, each day. Corn meal, is the best, and any green fodder roots which are of good flavour will also be good to feed them when giving milk.

Give your cows warm stables, milk as regularly as possible, and milk clean. After the milk is drawn set it away, after it is thoroughly strained, in a good milk room, which must be kept sweet and clean. All odours, from whatever source, must be avoided, as cream on the milk is tainted very easily by smoke, cooking of various foods, odours from the sink and other places. The milk room should be kept at a high temperature for the cream to rise well in the cold weather, and in warm weather kept as cool as possible. Many times the cream will not half rise on account of the extreme heat, and a good share of it is thrown to the pigs.

There is no doubt but that the large, patent pans now coming into use, with pipes carrying cold water around them so as to cool the milk and take out the animal heat as soon as set for the cream to rise, will prove to be a great improvement. Those who have used them consider them an improvement, and say that they paid for first cost in one season. They made good butter during the hottest weather last summer, and a good cream rose all through the extremely hot, damp weather. I had several dairies of butter made from those pans and the cooling apparatus the past season, which proved to be excellent. Doubtless these pans for setting milk will soon come into general use by good dairymen, as thereby a great amount of labour is saved as well as good butter made.

* Read before the Agricultural Meeting at Waitsfield, U. S.

Always skim your milk before the cream is thinned. As a rule, skim it just before it sours, or as soon as it begins to sour on the bottom of the pan. No time can be given to skim milk after it is set which will always be reliable, as milk rooms vary somewhat in temperature; but never fail to skim it while it is sweet and before it becomes tainted in the least. Here is where dairymen must not neglect the care necessary for producing choice butter. Here is where many dairymen make a mistake, in letting the cream stand on the milk too long; and the result is a common tub of butter—or even worse—*i.e.*, a poor tub of butter which nobody wants.

After your cream is taken from the milk, churn it in good season, taking care always not to let it stand too long before churning. Use a churn with as little machinery as possible. The plain churn, with the least number of floats, is the best for manufacturing solid butter.

Never salt your butter too much. 1 ounce of salt to 1 lb. of butter is enough for butter made to keep through the season, while from ½ and ¾ to 1 ounce is enough for the market, when the butter is soon to be used. In fact, light salted butter commands the highest price where it is sweet and new, and this is a fact for good dairymen to be sure to remember.

The working is another very important part to be performed in the manufacture of butter. Great care must be used to work it enough and then stop; and to do this requires close attention. Before working the butter, it should be thoroughly washed in good, pure water, until you can see that you cannot do much more to cleanse the buttermilk from the butter. As a rule, I find the finest butter where the maker works the butter twice before putting the same into the tub for market. The butter is taken from the churn and salted, and worked enough to thoroughly work in the salt, then set away over night, the next morning taken up and worked until it is clear from buttermilk. Then it is ready for use, either to send to market, or to keep through the season. I consider the use of a butter-worker the best mode of extracting the butter-milk, although fine butter can be made by working with the hands, if they are not so warm as to injure the grain of the butter. A sponge can be used with good success in connexion with the butter-worker, to soak up the moisture in the process of working. After your butter is ready to pack, get a nice clean tub or box to pack it in, as a clean package is always desired by the purchaser. Never put good butter into an old, dirty tub, but give your butter the best tubs the market affords. It will pay well in the end, and will be money well expended.

After you have succeeded in making a choice tub of butter, it is always wanted at good prices in the market, and you can readily find

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a purchaser for all you can manufacture, from the fact that so little excellent butter is made at present. A choice tub of butter at this time is sold for 40 cents in the market, while a good fair tub brings 35 cents per pound, and a common one 30, a poor one 25, and so on, down to grease prices. A difference of 5 cents per pound is well worth a good amount of time spent to make a choice article. As there are over 100,000 cows kept in the State of Vermont, and the annual product of the same will average 150 lbs. from a cow, or more, let us calculate the difference of 5 cents a pound on the whole amount made in the State. Reckoning 150 lbs. to the cow, 15,000,000 lbs. would be manufactured annually, and a difference in price of 5 cents per lb. would make an addition of 750,000 dols. to the annual wealth of our State—a fine increase to record in the manufacture of butter. If we only take as much pains in this branch of farming as we have to improve our breeds of sheep and cattle, the thing will be done; and when once done, it will pay so well, there will be no danger of a re-action as in the sheep business, from the fact that every tub of choice butter is at all times in demand at good prices, there not being enough of such butter made at the present time for the consumer. And to review what I have said in detail, allow me to say, keep no poor cows, and only those that make good firm yellow butter. Keep them well, both summer and winter. Use great care in cleanliness in every stage of the manufacture of this product. Have a good milk room, keep it perfectly sweet and clean, and follow the best modes of making good butter; and if you do not succeed, then go to those who do succeed, and find out their method, and in the end you will certainly come off victorious. And now, brother farmers and dairymen, let us all resolve to accomplish the art of making choice butter.—*Idem*, p. 242.

OLIS AND THEIR USES.

The principal fixed oils of commerce and manufactures are the following:—Sperm whale, from *Physeter macrocephalus* right whale, from *Balæna mysticetus;* elephant whale, from *Balænoptera antiquorum;* seal, from *Phoca vitulina;* walrus, from *Trichecus rosmarus;* cod, from *Morrhua Americana;* menhaden, from *Alosa Menhaden;* olive, from *Olea Europea;* lard, Nos. 1 and 2; Elaine, or Red oil; tallow (stearine, palmatine, and olein); petroleum; cotton seed, from *Gossypium Barbadense;* linseed, from *Linum usitatissimum;* palm, from *Elais guineensis;* rosin, from *Pinus Australis;* hemp-seed, from *Cannabis sativa;* sunflower, from *Helianthus Annuus;* castor, from *Ricinus communis;* rape-seed, from *Brassica napus;* ground-nut, from *Arachis hypogœa;* poppy-seed, from *Papaver somniferum;* colza, from *Brassica campestris.* There are besides a large number of fixed oils less used and obtained in smaller quantities from certain nuts (these yield about fifty per cent of weight in oil), kernels, seeds, roots, barks, and plants and birds, which would be tedious to name.

Seal oil is largely increasing in quantity and importance. The principal fisheries are on the coasts of Labrador, Greenland, and Alaska. To give an idea of the large catches which sometimes take place, a recent account may be cited from St. John's Newfoundland, the head-quarters of this business. the steamer *Eagle* discovered a herd of more than 200,000, mostly "baby" seals, one year old, so that every available place in the hold and on deck was crammed with blubber pelts. The hunters slept where they could—on the piles of frozen skins, in barrels on deck, or on the floor of the forecastle, between walls of fat. The arrival of five small steamers was also recorded, all on the same day—total value, 397,200 dollars—besides five sailing vessels, which brought 28,000 fat pelts. It is to be feared that indiscriminate slaughter will soon diminish this supply, as it has already the whales; and it is difficult to imagine what would have been the state of manufactures at present if lard oil and petroleum had not come to our aid.

The mode of obtaining oil from whale and sea blubber is by boiling, or by mechanical pressure only, in coarse bags, under hydraulic or screw presses. For No. 1 lard oil mechanical pressure only is now used, the old processes with sulphuric acid and distillation being abandoned. No. 2 lard oil is made on a large scale at Cincinnati and Chicago by putting the *whole* hog, except the bristles, into strong, tight cauldrons, into which superheated steam at an immense pressure is admitted. The bones, flesh, entrails, &c., are thus dissolved into a pasty mass along with the fat, and afterwards pressed to obtain the oil. The colour is light brown, body heavy, and the smell generally disagreeable. If allowed to stand in barrels or tanks, a dark, fetid deposit is made. The hogs thus used are often diseased, or inferior in some way. The oil usually sells at from 3*d*. to 6*d*. per gallon less than No. 1.

In obtaining olive oil, the finest quality (*Huile vierge*) is made by pressure of the whole olive, just sufficient not to crush the seed. The oil falls into water cisterns, whence it is skimmed from the surface. A second quality (*Huile ordinaire*) is made by harder pressure of the same pulp, mixed with hot water; and a third kind (*Huile d' Enfer*, so called from being soaked a long time in large vats under ground), by additional pressure of the same remainder, after long soaking and complete crushing of the seeds. It has been proved by the success of a planter on the island of St.

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Simons, on the coast of the State of Georgia, that the olive can be profitably grown on the United States. From 250 trees he obtained an average of five gallons per tree.

Pure poppy oil (from *Papaver somniferum*) is of a greenish yellow, has a pleasant, almond-like flavour, and greatly resembles olive oil, for which it is often substituted. It is also used as an adulterant of the former, and—unless added in large quantities—is most difficult of detection.

The aggregate quantity of cocoa-nut oil, rudely made in Asia and the Pacific Islands, is very large. Little of it reaches the American market, but much goes to Europe. It is mostly consumed by the natives, being burned lavishly for light in vessels partly filled with water, having the oil floating, and one or two porous sticks serving for wicks, and is also used for many other purposes. Like olive oil in Syria, it is butter, lard or oil, according to circumstances, in cooking. It forms the basis of soaps, and is used for making perfumes and cosmetics.

Castor oil, although of modern introduction, was well known to the Egyptians and Greeks—the latter calling it croton—a name now bestowed on another genus of euphorbiaceous plants, one of which yields the *oleum tiglii*, a strongly purgative oil. Castor oil is largely used for burning purposes in the East, Italy, and France, and in Europe and the United States in pharmacy, the manufacture of perfumery, and for lubrication. Considerable quantities of the bean are produced in India. The leaves of the Palma Christi (*Ricinus communis*), from the seeds of which castor oil is obtained, are now extensively used in Algeria as food for some silkworms.

It may not be generally known that a great quantity of oil is obtained from birds. The fulmar, which breeds in immense numbers in the Hebrides islands, and various other parts of the northern latitudes, furnishes a large proportion of the supply. The oil has a specific gravity of ·992, is of a bright red colour, penetrating odour, and in pathological qualities much resembles cod-liver oil. The penguin of the Falkland islands yields the largest amount. One schooner has been known to obtain 25,000 to 30,000 gallons in five weeks. This statement is vouched for by an American paper, and as it requires eleven brids to furnish one gallon of oil, that quantity demanded the destruction of about 275,000. This oil is mostly sent to London, and is used for little else than dressing leather. The dusky petrel of New Zealand, the frigate-pelican, the ostrich, the cassowary, and the goat-sucker of Trinidad all yield in the aggregate a large quantity of oil, much of which does not enter into commerce, but is consumed by the natives, who extract it by rude and wasteful processes.

All the seed-oils are made from seed first crushed between two heavy rollers called a "Dutch mill," and then ground under two pairs of granite stones, five to seven feet diameter, revolving in a circle, as well as on their axes. The pasty pulp thus formed is enclosed in an inner woollen and another horse-hair sack, and the oil usually extracted in a "Dutch stamping press," which is formed by a number of heavy wedges, each of about 600 pounds weight, placed side by side in cases just fitting the sacks, and actuated by cams on a horizontal shaft, giving a lift and fall of from sixteen to twenty-one inches. The dry oil-cake is an excellent food for cattle, and forms an important article of commerce.

The bleaching of oils is most cheaply effected by exposure to the sun-light in shallow pans—the use of alum, bichromate of potash, or other drugs for this purpose being injurious.

The immense consumption of oils, together with a deficient supply of sperm, whale, olive, and some other kinds, has caused extensive adulteration, and some singular compounds. In certain cases the combinations are of no disadvantage, and are known to the buyer or consumer; but as regards sperm and olive oils particularly, any mixture is disadvantageous, and would never be desired by the user. The same, though with less force, may be said of lard oil, where common whale or cotton-seed oils are added to cheapen the article, but this greatly increases the danger of spontaneous combustion in manufacture.

The adulterations already alluded to afford so many facilities difficult of discovery, and are practised to such an extent in Europe and America, as often to deceive the most experienced dealers; and it is almost as impossible to obtain strictly pure sperm and olive oil as veritable port wine. Large quantities of No. 1 lard oil were formerly exported from the United States to England and France, with the special object of being mixed scientifically with a moderate proportion of olive oil and certain compounds, to give the peculiar taste and greenish hue, and were returned in bottles as the best salad oil.

The vast production of petroleum oils during the past ten years has caused the making of many kinds of engines, machinery, and wool oils, the best of which—and some of them are really excellent lubricants (quite equal to sperm oils for certain work)—are composed of 25 to 30 per cent of refined petroleum, and 70 to 75 per cent No. 1 lard oil. The best of the latter is so gummy in nature that an addition of six gallons of refined petroleum to the barrel is a real advantage for any use, as it neutralizes the tendency to "gum" on the machines, which is sometimes exceedingly troublesome. Olive oil is the only proper oil for use in the worsted manufacture.—*British Trade Journal.*

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THE PEARL OYSTER FISHERIES OF TINNEVELLY.

The use of pearls as an ornament dates from great antiquity, and notwithstanding the numerous documents we possess on pearl oysters and their fisheries, we are still in the dark as to certain points of their history. Although we no longer share the belief entertained by Pliny and Dioscorides, that pearls are the production of the dew, we have scarcely an opinion that is not contradicted as to the nucleus of the pearl. The recent researches of Messrs. Kelaart and Jeffreys have, however, thrown some light on points which hitherto have not been elucidated, and the former, in his "Introductory Report on the Natural History of the Pearl Oysters of Ceylon," is of opinion that the pearl oyster may be carried away from its original bank and transported to a more suitable locality. Mr. Kelaart has observed that the pearl oysters detached themselves spontaneously from their point of adhesion in an aquarium where he had placed them, and that they fixed themselves to another part, not only once, but many times, at short intervals, so as thus to have changed places as often as twelve times in one month. He was able to keep his oysters in a glass aquarium for two or three days, and then throw them into the sea without their ceasing to live. He even succeeded in forming a colony of pearl oysters near Fort Frederick, in the open sea at different depths. The moment that a pearl oyster is introduced into an aquarium it collapses, but a few hours after it returns to life; after three or four days that portion of the byssus which remained fastened to the foot of the animal detaches itself; the animal then produces another byssus which fixes it to the spot where it is, or by means of a movement analogous to that of the snail seeks a more suitable spot, and fixes itself there by means of a new byssus, to which it spontaneously gives birth. The animal cannot detach its byssus from the rock, but it has the power of detaching it from its own body, and of reproducing another. Mr. Kelaart has observed that some oysters which had been thrown into the sea had adhered after a certain time to the surface of the rocks, and developed themselves in a normal manner at four or five feet from the bottom of the sea. According to Mr. Kelaart there is then no reason why pearl oysters should not like mussels and common oysters, live and develope themselves on artificial banks, and become a source of great revenue to the State, or be of great profit to those who would undertake to make new banks. The English Government has installed at Tuticorin an establishment for the artificial culture of pearl oysters, with a view of improving the fisheries of Tinnevelly. These fisheries are so little known in Australia that we think it necessary to give some account of them, which we have borrowed from a pamphlet read by Mr. Markham at the meeting of the Society of Arts, in 1867, being the result of an inspection of this fishery made by him in the spring of 1866:—From time immemorial the pearl oyster fishery of the strait which separates the island of Ceylon from the peninsula of India has been renowned throughout the old world, and has rivalled the well-known fishery of Bahrein in the Persian Gulf. Opinions differ as to the respective worth of the pearls of these fisheries. Tavernier, writing in 1651, gives the preference to those of Ceylon, but relates that a single pearl from the Bahrein banks sold for £11,000 of our money. Latterly, the banks of Rio de la Hacha, of Margarita, of Cubagua, and of Panama, in America, have afforded good harvests of pearls, but the banks of the Persian Gulf and the Gulf of Manaar have always been, and still are, the principal sources of supply of the old world. In the thirteenth century the pearl oyster fishery of Tinnevelly paid a considerable tribute to the Kings of Madura. The merchants and divers assembled at Betalar in April and May and the divers performed incantations to be preserved from the attacks of large fish whilst they were at the bottom of the sea. The so-called sorcerer is still paid by the Government of Ceylon to be present at these fisheries. In the time of Marco Polo the Soveriegns received a tenth and the divers a twentieth part of the product of the fishery. The great abundance of pearls obtained from Tinnevelly and the coast of Ceylon has excited the astonishment of all travellers who in olden times made the dangerous voyage from Europe to India. Captain Hamilton, who travelled in the East from 1688 to 1723, when the Dutch were masters of Tuticorin, says that a pearl fishery in that neighbourhood yielded an annual tribute of £20,000 to the Dutch East India Company. The Dutch appear to have fished too frequently, and without caring for the future. At Arippo, near Ceylon, they fished from 1667 to 1768 at short intervals. After their last fishing which took place in 1768, the oyster banks were left untouched until the first fishing of the English in 1796. After Tuticorin was occupied by the English there was, in 1822, a fishery which yielded the sum of £13,000 to the Indian Government. Between 1830 and 1856 there were thirteen inspections of the banks, and in each it was proved that the number of pearl oysters which had obtained a suitable development was not sufficient to make a profitable fishery; consequently no fishing was attempted. During the same lapse of time the condition of the fisheries near Ceylon was much more satisfactory. From 1796, when the English first fished at Arippo, until 1809 the product was £517,842; from 1828 to 1837 it was £227,131, and from 1855 to 1860 it was £117,153. In

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1859-60 one of the two principal banks of Ceylon (the "Modrigan") furnished twelve millions and the "Horde bridge" sixty millions of shells! The unsatisfactory state of the oyster banks of Tinnevelly from 1830 to 1856 has been attributed to various causes. Captain Robertson, the last overseer appointed to inspect Tuticorin thought that the widening of the "Paumben Pass," which caused a strong current to flow on the pearl oysters prevented them from adhering to the rock, and that the boats employed to fish the large oysters called "chanks" had injured the pearl oysters by casting their anchors on the banks; whilst the native divers attributed the state of the banks to the pernicious influence of two other bivalves called Soorum (Modiole) and Bullikoz (Avicule). However it may be an inspection made in 1856, by Captain Robertson, shows that these banks were in the most satisfactory condition, and that four other banks near Tuticorin were covered with young oysters, which in 1860-61 would have been sufficiently developed to be fished. The Government of Madras decided that all necessary precautions should be taken to prevent any damage being done to the banks during the interval. Vessels were sent to protect them from marauders, and the "chank" fishing stopped. Captain Phipps succeeded Captain Robertson, and under his auspices the fishery of 1860 was commenced, the first attempted since 1830. The fishery of 1860 commenced 7th March, and the sale of that portion of the oysters coming to the Government took place by public auction; the price rose gradually from 15 to 40 Rupees per thousand. 15,874,500 shells were sold, giving to the Government a clear profit of more than £20,000 after defraying all expenses, as also the share allotted to the divers. In 1861 the results were equally satisfactory; but in 1862 the inspection of the banks led to a cessation of the fishery, which was not revived until 1866.

The production of pearls is a point upon which "savans" have long disagreed, and various explanations have been given to account for the nucleus round which the pearl is found. Mr. Kelaart, who has given the greatest attention to this subject, suggested the idea that the eggs which escape from the distended parts of a too strongly developed ovary, might fix themselves in the interstices of the fish, and thus become the nucleus of the pearls. But Mr. Jeffreys, in his "Report to the Secretary of State for India," says that by sacrificing a few pearls and dividing them into sections, and by examining each section with a microscope, he discovered that the nucleus was formed by an animal, although this is a difficult matter to prove when animals are so diminutive, particularly as the division of the pearl into sections must necessarily entail the loss of some of its parts. According to Mr. Jeffreys, pearls are produced by the presence of small crustaceous parasites, which adhere strongly to the oyster and cause an irritation. The pearl oyster wishing to disencumber itself of this, stifles it under a pearly matter of the same nature as that which lines the interior of the shell; the gradual superposition of one layer on the other in concentrical order determines the foundation of the pearl. The shape of the pearl naturally depends upon that of the nucleus. The parasites are of different species; some are spherical, others oval; they may be found approaching sufficiently near to each other to form a double or irregular pearl. Pearls are sometimes found in the pearly covering inside the shell, but with few exceptions they are of a very bad shape.

Banks of pearl oysters are found in the open sea near Tuticorin and Tricheendoor; they are about 6 to 8 miles from the coast, and at a depth of from 5½ to 8 fathoms below the surface. Each bank bears a name by which it is known to the divers. The banks are composed of rocky masses rising in places from a sandy bottom, and are probably exposed to the current of the ocean which in carrying with it the sand from the interstices of the rocks often destroys the oysters to a considerable distance. A dead fish exercises a pernicious influence upon all that surrounds it, and more than this, the pearl oysters share the banks with other inhabitants, some of which are undoubtedly injurious to their well-being. Amongst the bivalves which are most commonly met with is a large "Puine" (called by the natives Arkoe) and the Soorum and Bullikoz before mentioned. The divers think that the two latter are really dangerous enemies to the pearl oyster. Mr. Jeffreys is not of this opinion; he admits only that when these shell-fish are in too great numbers they can stifle the pearl oyster, acting the same part as weeds do in a garden. Their food is the same as that of the pearl oyster, and is composed of microscopic animals, of which a great number exist within their reach. The pearl oysters appear also to have a great enemy in the large "chank" (Turbinella rapa), which is used as a trumpet in the worship of idols, and which, cut into circular segments, forms bracelets, which the women wear on their wrists. When the opportunity offers, the chanks, by means of their tongue, bore small holes in the shell of the oyster and eat the fish. Starfish of a white colour, spotted and fringed with crimson, are sometimes found on the pearl oyster banks, and, as they are believed to be injurious to the oyster, are removed by dragging.

The precarious and uncertain state of the Tinnevelly fisheries must be attributed to carelessness and want of foresight, and the absence of any organized system upon a scientific basis. Here we have a valuable natural product which,

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under certain conditions, might be the source of considerable wealth, were it not that a system of destruction has been inaugurated with the aim of an immediate gain. This is exactly what occurred in the case of the cinchona bark, in South America, and the teak forests of Malabar. The same general principles appear to be applicable to the preservation of forests and the management of a pearl oyster fishery. As a nursery of young trees forms an essential part of the forester's system, so in the opinion of Captain Phipps, a park of young pearl oysters would serve to fill the vacant spaces in the pearl oyster banks; and the method which has been adopted for the eatable oysters on the coasts of France and England serves to confirm this opinion. The principal external difference between the eatable and the pearl oyster, is that the former fasten themselves to the rocks and stones by means of a byssus, whilst the latter remain flat on the earth on their convex side.

Under the auspices of the Government of India, Captain Phipps has established a nursery of pearl oysters in a suitable spot in the bay of Tuticorin on a bank of from 3 to 7 feet deep, entirely sheltered from the surf, from current, and the flow of water. A portion of this bank, 450 in length by 8 feet in breadth, has been enclosed within walls composed of blocks of coral, strengthened with rows of piles. In the centre of the eastern wall an opening has been left of 8 feet in width, which can be closed by wooden doors. The construction of this park or nursery was commenced in November 1864, and finished towards the end of 1865. In due time a supply of spawn was collected and placed therein, until the oysters attained sufficient size to be transported to the open sea. Transporting into the open sea is necessary, because it is impossible to form an enclosed park sufficiently large to contain the number of shells that would be required for a remunerative fishery; and also because it is generally believed that the quality of the pearls depends on the depth and clearness of the water in which they are found. A single pearl oyster of 5 or 6 years of age does not contain less than twelve million eggs, and in the fishery of 1861 the total number of shells fished rose to sixteen millions, so that the number of young shells obtained annually in this park appears sufficiently abundant to provide for any scarcity in one or many other banks. It is during the period of its first development that the pearl oyster is most exposed to danger on the original banks; however, the artificial culture has this advantage, that the oyster will be exposed to these dangers during a much shorter time.—*The Journal of the Acclimatization Society, Paris.*

ACT OF THE GOVERNMENT OF INDIA.

The following Act of the Governor-General of India in Council received the assent of His Excellency the Governor-General on the 5th May 1874.

Act No. XI of 1874.

An Act to amend the Code of Criminal Procedure.

Preamble.

For the purpose of amending the Code of Criminal Procedure; It is hereby enacted as follows:—

Amendment of Section 2.

1. In Section 2, after the 4th paragraph, the following shall be inserted (namely):—

"The cases in which the Police may arrest without warrant or not, in the case of each offence under the Indian Penal Code or any other law referred to in Section 8;

whether a warrant or a summons shall ordinarily issue in the first instance,

whether the offence is bailable or not, and

the Court by which the offence is triable;

are indicated respectively by the 3rd, 4th, 5th, and 7th columns of the 4th Schedule hereto annexed."

Addition to Section 4.

2. To Section 4, the following clause shall be added (namely):—

"In every part of this Code, except where a contrary intention appears from the context, words which refer to acts done extend also to illegal omissions."

Amendment of Sections 18 and 36.

3. To Sections 18 and 36, the following words shall be added (namely):—

"or if he think further inquiry or additional evidence upon any point bearing upon the guilt or innocence of the accused person to be necessary, he may direct such inquiry or evidence to be made or taken."

Amendment of Section 39.

4. In Section 39, after the word "limits," the following words shall be inserted (namely): "and may, with the previous sanction of the Governor-General in Council, declare any local area to be a District."

Addition to Section 42.

5. To Section 42, the following clause shall be added (namely):—

"With the previous sanction of the Governor-General in Council, the local Government

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may delegate, with such limitations as it may think proper, to any officer under its control, the power conferred by the 1st Clause of this section."

Amendment of Sections 44 and 47.

6. In Section 44, and the 1st paragraph of Section 47, the word "criminal" shall be omitted.

Addition to Section 46.

7. To Section 46, the following illustration shall be added (namely):—

"*Illustration.*—A Magistrate of the 3rd Class having jurisdiction finds an accused person guilty but considers that he ought to receive a more severe punishment than imprisonment for a term of one month, or a fine of 50 Rupees. On recording the finding, submitting the proceedings and forwarding the accused to the Magistrate of the District, such Magistrate may pass a sentence on the accused including solitary confinement and whipping."

Amendment of Section 59.

8. In Section 59, after the word "Court," the words "inferior to a Court of Session" shall be inserted.

Addition to Section 63.

9. To the 2nd paragraph of Section 63, the following words shall be added (namely):—

"Provided that such direction be not repugnant to any direction previously issued under the 24th and 25th of Vic., Cap. 104, Section 15, or under Section 64 of this Code."

Proviso of Section 64 repealed.

10. In Section 64, the proviso shall be repealed.

Power to transfer criminal cases from one High Court to another.

11. After Section 64, the following section shall be inserted (namely):—

"64A. Whenever it appears to the Governor-General in Council that it will promote the ends of justice or tend to the general convenience of parties or witnesses, he may, by notification in the *Gazette of India*, direct the transfer of any particular criminal case or appeal from one High Court to another High Court, or from any criminal Court subordinate to one High Court to any other criminal Court of equal or superior jurisdiction subordinate to another High Court.

"And the Court to which such case or appeal is transferred shall deal with the same as if it had been originally instituted in or presented to such Court."

Amendment of Section 75.

12. For the 2nd paragraph of Section 75, the following shall be substituted (namely):—

"When the offence, or one of the offences, complained of is punishable with death or transportation for life, the commitment shall be to the High Court.

"And where any person so committed is charged with several offences, of which one is punishable with death or transportation and the other with a less punishment, and the High Court considers that he should not be tried for the offence punishable with death or transportation, the High Court may nevertheless try him for the other offence."

Amendment of Section 186.

13. In Section 186, for the words "charged before any criminal Court with an offence," the following words shall be substituted (namely):—

"accused in any criminal Court of an offence."

Amendment of Section 195, Explanation III.

14. In Section 195, Explanation III, for the word 'cannot,' the words "shall not ordinarily" shall be substituted.

Addition to Section 202.

15. To Section 202, Clause 1, the following words shall be added (namely): "unless the Magistrate is satisfied that such Government Pleader or other person is already aware of the commitment and the form of the charge."

Addition to Section 216.

16. To Section 216, the following explanation shall be added (namely):—

"EXPLANATION III.—The charge shall be prepared as soon as the Magistrate is of opinion that a *primâ facie* case has been established against the accused person, although the whole of the evidence for the prosecution may not have been completed."

Amendment of Section 222, paragraph (10).

17. In Section 222, for paragraph (10), the following shall be substituted (namely):—

"(10). Insult with intent to provoke a breach of the peace under Section 504, and criminal intimidation under Section 506, of the Indian Penal Code."

Amendment of Section 231.

18. In Section 231, for "Section 472," the following words shall be substituted (namely):—

"Section 33, Section 435, Section 472 or Section 474."

Amendment of Section 247.

19. To Section 247, the following words shall be prefixed (namely): "The person conducting the prosecution shall then open his case, and"

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Amendment of Section 249.. 20. For the 1st paragraph of Section 249, the following shall be substituted (namely):—

"When a witness is produced before the Court of Session or before the High Court in the exercise of its original or appellate criminal jurisdiction, the evidence given by him before the committing Magistrate may, in the discretion of the presiding Judge, be treated as evidence in the case, if it was duly taken in the presence of the accused person."

Amendment of Section 263. 21. In the 4th paragraph of Section 263, after the word "verdict" the words "of the jurors or" shall be inserted; and for the 5th and 6th paragraphs of the same section the following shall be substituted (namely):—

"If the Court disagrees with the verdict of the jurors, or of a majority of the jurors, on all or any of the charges on which the prisoner has been tried, and considers it necessary for the ends of justice to do so, it may submit the case to the High Court. If the Court does so, it shall not record judgment of acquittal or of conviction on any of the charges on which the prisoner has been tried; but it may either remand him to custody or admit him to bail.

"The High Court shall deal with the case so submitted as it would deal with an appeal, but it may acquit or convict the accused person on the facts as well as law, without reference to the particular charges as to which the Court of Session may have disagreed with the verdict; and if it convict him, shall pass such sentence as might have been passed by the Court of Session."

Amendment of Section 271. 22. For Section 271, the following sections shall be substituted (namely):—

Appeal from sentence of Sessions Judge. "271. Any person convicted on a trial held by a Sessions Judge may appeal to the High Court.

"An appeal may lie on a matter of fact as well as a matter of law, except where the conviction was in a trial by jury, in which case the appeal shall be admissible on a matter of law only."

Procedure in case of sentence of death. "271A. When any such person is sentenced to death, the Sessions Court shall give him a copy of the sentence and inform him that if he wishes to appeal, his appeal must be made within seven days; and the Court shall delay the transmission of the reference hereinafter required for a reasonable time not exceeding seven days to allow of the appeal and reference being made at the same time.

"When it appears that the execution of the sentence should not be delayed, the Sessions Court may forward the reference at once, recording its reasons for so doing."

Procedure where Judges of Court of appeal, &c., are equally divided. "271B. Where the Judges composing the Courts of appeal, reference or revision are equally divided, the case, with their opinions thereon, shall be laid before another Judge, and such Judge, after such examination and hearing as he thinks fit, shall deliver his opinion, and the judgment or order shall follow such opinion."

Amendment of Section 272. 23. In the 2nd paragraph of Section 272, for the words "and the rules of limitation shall not apply to appeals presented under this section," the following clause shall be substituted (namely): "No appeal shall be presented under this section after six months from the date of the judgment complained of."

Amendment of Section 274. 24. In the 2nd Clause of Section 274, the last twenty words shall be omitted, and to the section the following explanation shall be added (namely):—

"EXPLANATION.—A sentence by which imprisonment is awarded in default of payment of fine, is not a sentence by which two or more punishments are combined, within the meaning of the 2nd Clause of this section."

Amendment of Section 276. 25. For Section 276, the following shall be substituted (namely):—

Copies of proceedings. "276. If any person affected by a sentence or other order passed by a criminal Court desires to have a copy of the Judge's charge to the jury or of any other proceeding not being the judgment or order provided for by Section 464, he shall, on applying for such copy, be furnished therewith provided that he pay for the same, unless the Court, for some special reason, sees fit to furnish it free of cost."

Amendment of Section 278. 26. To Section 278, the following clause shall be added (namely):—

"In rejecting an appeal under this section, the Appellate Court shall not enhance the sentence."

Amendment of Section 279. 27. To Section 279, the following words shall be added (namely):—

"and in cases under Section 272 where the Appellate Court decides to hear the appeal,

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it shall also cause notice to be given to the respondent"

Amendment of Section 280.

28. To the 1st Clause of Section 280, the following words shall be added (namely):—

"or order the appellant to be retried."

Amendment of Section 296.

29. In the 2nd paragraph of Section 296, the words "Provided that" shall be omitted and the following words shall be added (namely): "upon the matter of such complaint or of which the accused person has been, in the opinion of the Court or Magistrate, improperly discharged.

"Provided that, if in the opinion of such Court or Magistrate, the evidence shows that some other offence has been committed by the accused person, such Court or Magistrate may direct the subordinate Court to inquire into such offence."

Amendment of Section 297.

30. In the 3rd paragraph of Section 297, for the word "inconveniently" the word "incorrectly" shall be substituted.

Amendment of Section 298.

31. For Section 298, the following shall be substituted (namely):—

"298. The High Court or the Court of Session may direct the Magistrate of the District, by himself or by any of the Magistrates subordinate to him,

"or the Magistrate of the District may direct any subordinate Magistrate,

"to make further inquiry into any complaint which has been dismissed under Section 147."

Amendment of Section 302.

32. For the 4th paragraph of Section 302, the following section shall be substituted (namely):—

"302A. In cases tried by any Court inferior to a Court of Session, where the accused person is sentenced to imprisonment, the Court shall forthwith forward him with a similar warrant for the execution of the sentence to the officer in charge of the jail of the District in which the trial was held:

"But where the accused person is sentenced to whipping, the sentence may be executed at such place and time as the Court may direct."

Amendment of Sections 311 and 312.

33. In the 3rd paragraph of Section 311, after the word "Magistrate," the words "or a Superintendent of a Jail" shall be inserted.

And in the 1st and 2nd paragraphs of Section 312, after the word "Magistrate," the words "or Superintendent" shall be inserted.

Amendment of Section 322.

34. To the 1st Clause of Section 322, the following words shall be added (namely): "or grant a reprieve or respite in respect of such sentence," and the following clauses shall be added to the same section (namely):—

"This section applies to all punishments inflicted by the High Court. Provided that nothing herein contained shall be deemed to interfere with the right of Her Majesty to grant pardons, reprieves, respites, or remissions of punishment:

"When any fine or forfeiture is imposed on any person for any offence, the Governor-General in Council or the local Government may (subject to the provisions of Section 308) direct that a share or proportion of such fine be paid over to the prosecutor towards defraying his expenses, as the Governor-General in Council or the local Government thinks fit."

Amendment of Section 330.

35. After the 2nd paragraph of Section 330, the following shall be inserted (namely):—

"If the witness is within the local limits of the ordinary original criminal jurisdiction of any of the High Courts of Judicature at Fort William, Madras, and Bombay, the Court dispensing with his personal attendance may direct a commission to any Police Magistrate within such limits, and such Police Magistrate shall have the like power to compel the attendance and examination of witnesses as he possesses for that purpose in cases pending before him."

And in the 3rd paragraph of the same Section, for the words "to which," the words "upon which" shall be substituted, and for the words "cause a return to be made," the words "shall examine the witness" shall be substituted, and after the word "Magistrate," the words "or Police Magistrate" shall be inserted.

And after the 4th paragraph of the same section, the following paragraph shall be inserted (namely):—

"After any commission issued under this section has been duly executed, it shall be returned, together with the deposition of the witness examined thereunder, to the Court out of which it issued; and the commission, the return thereto, and the deposition of such witness may be used as evidence in the case and shall form part of the record."

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36. In Section 379, the following words shall be omitted (namely):

Amendment of Section 379.

"by or under the direction of an officer in charge of a Police-station, or by a Police officer making an investigation."

37. In the 2nd paragraph of Section 398, for the words "accused person," the words "party or witness" shall be substituted.

Amendment of Section 398.

Amendment of Section 418.

38. In Section 418, before the word "trial," the words "inquiry or" shall be inserted;

and to the same section the following explanation shall be added (namely):—

"EXPLANATION.—In this section the term 'property' includes not only such property as has been originally in the possession or under the control of any party, but also any property into or for which the same may have been converted or exchanged, and anything acquired by such conversion or exchange, whether immediately or otherwise."

Amendment of Section 425.

39. To Section 425, the following clause shall be added (namely):—

"The trial of the fact of the unsoundness of mind of the accused person shall be deemed to be part of his trial before the Court."

Amendment of Section 451.

40. For the 1st sentence of the illustration to Sec. 451, the following shall be substituted (namely):—

"A is convicted of an offence under Section 196 of the Indian Penal Code upon a charge which omits to state that he knew the evidence which he corruptly used or attempted to use as true or genuine, was false or fabricated."

Amendment of Section 464.

41. For the 2nd paragraph of Section 464, the following shall be substituted (namely):—

"The judgment or order shall be explained to the accused person or person affected by it, and on his application a copy thereof shall be given to him without delay free of cost and in his own language, if practicable, if not, in the language of the Court."

And to the 7th paragraph of the same section, the following words shall be added (namely):—

"Where such error or defect is in a matter not affecting the merits of the case."

Addition to Section 466.

42. To Section 466, the following clause shall be added (namely):—

"In this section the expressions "Judge" and "public servant" shall be taken to have the meaning assigned to them respectively by the Indian Penal Code."

43. Chapter XXXVI *(Of the Dispersion of unlawful Assemblies)* shall be deemed to apply to the towns of Calcutta, Madras, and Bombay, and the word "Magistrate" wherever it occurs in the said chapter, shall be deemed to include a Magistrate of Police.

Chapter XXXVI applied to Presidency Towns.

44. To Section 503, the following words shall be added (namely):

Amendment of Section 503.

"And in case such penalty cannot be so recovered, the surety shall be liable, by order of such Magistrate, to imprisonment in the civil jail for a period not exceeding six months."

45. In Section 527, for the words "four hundred and twenty-one," the words "five hundred and twenty-one" shall be substituted."

Correction of Section 527.

46. In the 3rd Column of the IVth Schedule to the Code of Criminal Procedure, opposite No. 323, for the words "Shall not arrest without warrant," the words "May arrest without warrant" shall be substituted; and opposite No. 428, for the word "Ditto," the words "May arrest without warrant" shall be substituted.

Amendment of Schedule IV, Column 3, Nos. 323 and 428.

Interpretation of "Section."

47. In this Act, "Section" means section of the Code of Criminal Procedure.

And all references to the Code of Criminal Procedure made in Acts heretofore passed or hereafter to be passed shall be read as if made to such Code as amended by this Act.

References to Code of Criminal Procedure.

(Signed) WHITLEY STOKES,
Secretary to the Govt. of India.

Re-published by order of the Right Honourable the Governor in Council.

(Signed) D. F. CARMICHAEL,
Acting Chief Secretary.

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